

Product Overview

Jay Radio Remote Controls



CONDUCTIX
wampfler



Is Safety your priority?

In a world where mobility is an ever-growing challenge, both for humans and machines, remote controls offer a safe way of operating or monitoring machines from a distance.

The Jay line of remote controls from Conductix-Wampfler provides safety radio communications to ensure the mobility of humans and industrial equipment safely and efficiently even in the harshest environments.

Whether on overhead cranes, on industrial vehicles, in automated warehouses, for factory automation, or for railway renovation – people rely on **Jay radio remote controls**.

The comprehensive range offers countless solutions to adapt to an extensive number of applications.

Is safety your priority?

Our solutions are certified even in the harshest environments!

Do you operate in explosive environments?

You can rely on our robust ATEX range!

Do you want to connect to your industrial automation network?

Our solutions are compatible with most of them!

Reasons to trust us :

- Expertise in radio solutions based on 35 years of experience on the field
- Able to adapt to each application and environment
- Complete offering for explosive environments supported by highly professional technicians
- Highly trained employees, focused on customer success
- Collaboration with research laboratories and innovative startups that drives innovation
- Continuous progress culture proven through ATEX-IECEX and ISO 9001-2015 certificates granted since 1996
- Application configuration stored in customer proprietary file: a guarantee for confidentiality and autonomy
- Free of charge tools for customers to update and improve their solutions



Beta transmitter ready for use on a mobile gear

Applications

Beyond our radio technology and safety expertise, our history is based on in-depth knowledge of the applications of our customers. From the base of our standard products and features, we design a solution that matches with your specific application and its environment. Through our customer relationships we have become well versed with a broad spectrum of dangerous environments. We take pride in our strong ability to integrate a radio transmission system within all types of electrical or electronic architectures.

Overhead cranes

For more than 35 years, our solutions have been widely used for industrial lifting and handling machinery. Advanced features like infrared startup validation, multiple equipment management and connectivity with industrial automation systems target advanced overhead cranes installations such as:

- Synchronized multi-cranes management
- Automatic process cranes with industrial bus interfaced with radio control
- Harsh environments : nuclear, explosive, high dust, high temperature



Besides lifting and handling activities, Jay solutions proved their relevance in the fields below:

Intralogistics

- Mobile equipment fleet management in fully automated warehouses
- Semi-automatic operation of pallet shuttles
- Manual takeover of autonomous guided vehicles for maintenance purpose
- Control of mobile racks

Factory automation

- Supervision of a continuous process via a handheld terminal wirelessly connected to the factory's automation system
- Management of blocked-access areas to allow maintenance and troubleshooting without production shutdown
- Wireless machine to machine transmission of emergency stop signal and digital inputs/outputs

Industrial vehicles

- High-pressure control and articulated arms movement on vacuum trucks
- Operator presence detection and liquid gas transfer on road tankers, under potentially explosive conditions
- Bin loading / unloading on bulk bin trucks

People transport equipment

- Emergency stop or speed reduction control for ropeway installations or amusement rides
- Manual takeover of driverless shuttles

Liquid and bulk transfer under potentially explosive conditions

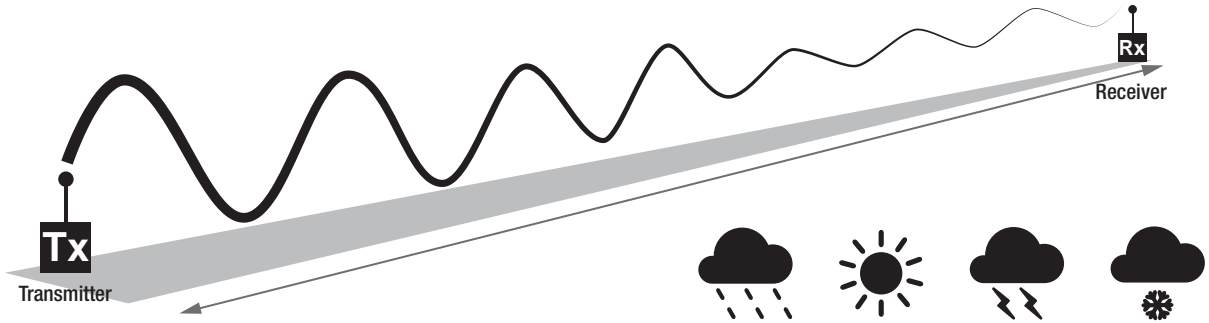
- Operate marine loading arms for oil & gas transfer in ports
- Spirits transfer control in distillery caves where confined alcohol vapors pose a risk of explosion
- Ship's deck control of coal loading conveyor at port bulk terminal

Construction

- Manage stone dump from ballast machinery for railways renovation
- Remote clamping of drilling pipes
- Move and operate mobile crushers
- Control concrete pumps and concrete projection equipment

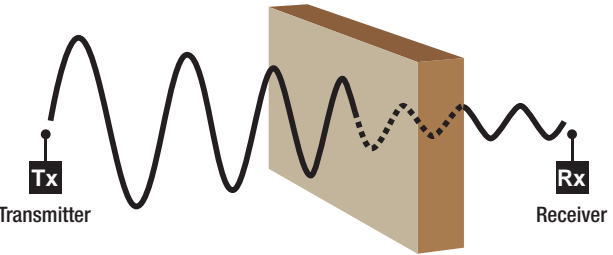
Basics about radio transmission

The use of radio communications in industrial environments is marked by different factors that affect the propagation of radio waves and influence their attenuation, including:

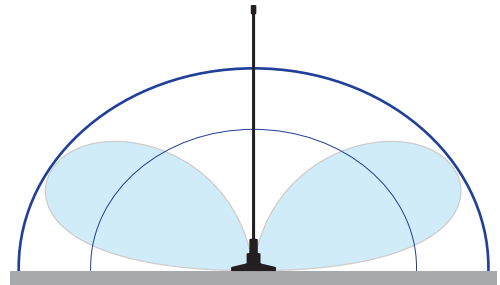


Distance between transmitter and receiver, say an operator and a machine

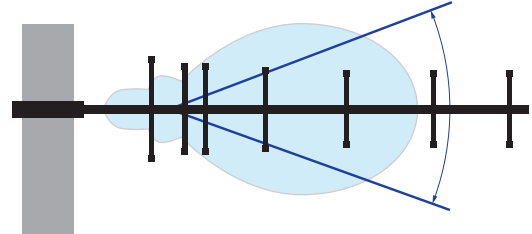
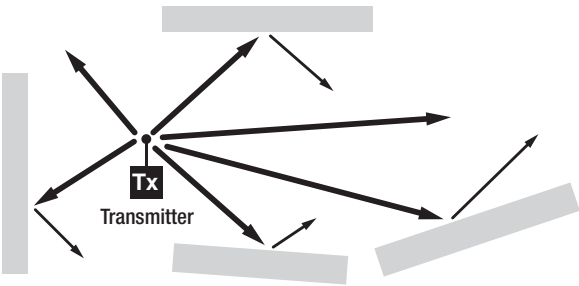
Meteorological and environmental phenomena, such as atmospheric conditions such as rain, snow, storms, etc., along with dust or pollution affect radio waves propagation



Physical medium, i.e. the quantity and nature of obstacles that exist between the transmitter and the receiver



Emission diagram for an omnidirectional antenna



Emission diagram for a directional antenna

Antennas, which radiate and capture the radio waves, with an efficiency related to their shape and electrical properties

How to achieve a reliable radio link?

A failure in radio transmission might result in:

- a loss of security, if an emergency stop were missed
- operating losses, as a result of production downtime caused by operator to machine miscommunication

Surely, maintaining a reliable radio link is critical for best industrial performance.

Jay's experience in safety radio implementation in all sort of industrial environments built a strong field expertise with the ways and means to guarantee reliable transmission.

Our means:



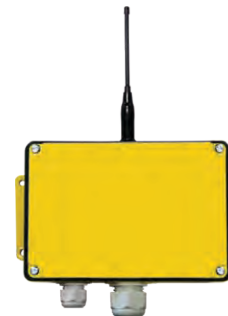
Adjustable emission power



Long-range on-demand



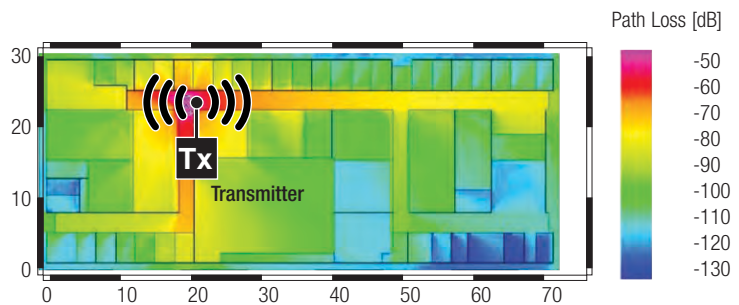
Broad range of antennas to adapt to each environment



Repeater for adverse situations such as highly-packed warehouses






Radio signal strength indication to map radio conditions in the operating zone



Jay Radio Remote Controls Overview

Jay Radio Remote Controls offer a broad spectrum of solutions to address the control and the emergency stop of all kinds of industrial machines or vehicles. Selecting the best adapted solution depends on the answers to the questions below.

	Industrial RRC		
			
	Orion Series*	UD Series*	Beta Series
Control			
Direct	●	●	
Advanced			●
Safety Level			
SIL 2 - PLd		●	
SIL 3 - PLe			●
Environment			
ATEX			●
Corrosive metal dust			

* Not available in all regions. Please contact customer service or your local representative for more information.

● **How will the radio receiver be connected to the machine to control?**

- Advanced Control series can connect to an automation system via the most common industrial buses (Profinet / Profibus, EtherCAT, Ethernet/IP, CANopen, Modbus, ...). A 2-way radio link between transmitters and receivers allow feedback transmission to the automation system. The automation system can in return use the transmitters screens as remote mobile terminals to display information to operators.
- The UD and Orion Series are designed for direct control of machineries through relay outputs.

Safety Radio Remote Controls



Gama Series



Pika-Moka Series



RadioSafe Series

Gama Series	Pika-Moka Series	RadioSafe Series
		●
●	●	
●	●	●
●	●	
●		

● **What is the required emergency stop safety level?**

- The SIL 3-PLe Series (Advanced Control & RadioSafe) must be used for the most dangerous or difficult to protect applications
- The SIL 2-PLd UD range covers moderately dangerous applications or the ones that can be partly protected
- Orion industrial radio remote controls are suitable for applications where no certified emergency stop is required

● **Will the system operate in severe environmental conditions?**

- ATEX versions of Advanced Control series are dedicated to explosive environments
- Optional features on Advanced Control series address corrosive vapors, metal dust
- Wearing thick gloves is no obstacle to ergonomic working conditions with Gama and Pika-Moka transmitters

Industrial Radio Remote Controls Orion Series*

Orion series address a wide range of industrial applications where versatile multifunction control is required, as for example:

- Lighting in halls of a very large plant with a single small device
- Large scale storage with access management of mobile shelves
- Truck drivers access to site gate and dock doors
- Industrial plant with sectional doors and several users



In addition to a reliable omnidirectional radio link between individually coded transmitter + receiver sets, Orion offers differentiating features such as:

- ON / OFF button on transmitters to avoid any unintentional action
- individual setting of the switching mode for each relay to operate a machine or device in a bistable / make / break mode
- programmable standby time delay to preserve battery power
- modification of the radio working frequency if already used on site
- radio power adjustment to set the radio range to the level required by the application
- receivers suitable for wall mounting or fastening on a DIN rail
- supplied with adhesive labels sheets with a large selection of symbols to match the application

* Not available in all regions. Please contact customer service or your local representative for more information.



Transmitters Orion Series

Orion offers 2 designs of transmitters:

- compact transmitter with 2 or 4 buttons – OREV
- multifunction transmitter for up to 16 buttons – OREL

Both designs can be equipped with an ON/OFF button to switch on and off the transmitter, thus avoiding any unintentional action.

IP 65 for outdoor use.

Radio transmission:

18 frequencies available in the 433 MHz band

Typical range*

- 150 m in unobstructed area
- 50 m in industrial indoor environment

* Metallic structures and other radio-transmitters on the same 433 MHz band might affect radio-transmission, hence reducing the range

Receivers Orion Series

Receivers come in 3 models with 2 to 9 function relays



Relays operation

User-set operating mode:

- «Continuous make contact» : relay closed as long as transmitter button pressed
- «Continuous break contact» mode:
The receiver relay remains open as long as the corresponding control button on the transmitter remains pressed.
- «Bistable» mode:
The receiver relay is closed the first time the corresponding control button on the transmitter is pressed, and opens on the second time the control button is pressed.

Fixing

Magnetic contact for quick fixing on steel surfaces

Antennas

A complete range of antennas to optimize reception in all situations:

- ½ wave for extended range
- magnetic base for fixing on steel surfaces
- feedthrough for vehicles

Safety Radio Remote Controls

UD Series*

The UD series provides safe and ergonomic distant control for cranes, machines or vehicles. A SIL 2 - PLd certified emergency stop makes it particularly suitable for material handling.

The range consists of:

- 4 sizes of pushbutton transmitters
- 3 sizes of receivers
- An extensive choice of antennas
- Numerous accessories: batteries, chargers, carrying accessories

The modular design allows personalization by choosing the type of pushbutton / switch and label for each location, the number of relay outputs, the programming of relay / buttons assignments, interlocking between buttons, secure start-up options.

* Not available in all regions. Please contact customer service or your local representative for more information.



UD remote controls makes operations safe, simple and reliable.

Safe

- Start-up validation by infrared pointing the transmitter towards the equipment to control for 100% error-free match-up
- Removable electronic key containing the receiver ID code to entrust authorized operators only
- Memorization of the number and duration of all operations

Simple

- Lightweight compact design to work without arm fatigue
- Ergonomic layout of pushbuttons enabling one-hand control
- Easy multi-user operation thanks to an instant infrared transmitter-receiver association at start-up

Reliable

- 12 hour battery life to cover one working shift
- Pushbutton / switches spares for easy individual replacement of worn buttons and further lifetime extension
- Dialog UD software for easy commissioning and maintenance: radio frequency programming, preventive maintenance alerts, diagnosis assistance, and quality monitoring of radio reception





Transmitters UD Series

The transmitters come in 4 models with 2 to 10 function buttons. Each model also contains:

- an emergency stop palmswitch
- a «On/Horn» button

Function button type

- One-step pushbutton (single speed)
- Two-step pushbutton (double speed)
- Rotary switch with 2 fixed positions
- Rotary switch with 3 fixed positions
- Rotary switch with 3 positions with automatic return
- Electronic switch with 3 fixed positions

Fast charging battery to recover 1 hour of life after just 10 minutes charging time



Receivers UD Series

The receivers come in 3 models, URR, UCR and UDR with 6 to 18 function relays. Each model contains:

- A RS232 serial link for diagnosis and programming
- 1 «Horn» relay to trigger a warning tone
- 2 safety relays dedicated to the emergency stop

In addition, URR and UDR can connect and manage from 1 to 3 sets of infrared photocells for start-up validation or transmitter-receiver association

An IP65 protection index makes UD receivers suitable for outdoor use.





Safety Radio Remote Controls Beta Series

Do you need a high level of safety to protect people?
Is your application very specific?
Is your process complex?
Do you want to move freely?
Do you prefer pushbutton operation?
Do you face explosion risks?

Beta Series offers safe and agile pushbutton solutions to fulfill these requirements!

ATEX version, it will even operate safely under permanent risk of explosion (gas: zone 0, dust: zone 20).



Beta 6

Beta 2



Multimode management

Multiple screen pages where each function button is allocated to a specific command.

For sure, with either 2 or 6 buttons, you will have enough!

Ergonomic

- Compact casing for easy one-hand use
- Buttons laid out to prevent undesired commands



Easy to set-up, easy to maintain through iDialog

- Click & set programming for straight 1 button = 1 function
- Store your configuration file and keep it confidential if needed
- Instant start of a new device: just upload the configuration file in it!
- Broad offer of spare parts for extended lifetime

Accessible sophistication through iDialog

- Multimode management for screen display to fit on-going processing step
- Multiple conditions programming and value scaling
- Allow an external automation system control of radio system behavior according to process values and external sensor data





SIL 3-PLe
emergency stop

Receivers for Beta Series

4 receivers and their many options adapt to a broad range of equipment:

- power wire or industrial bus interfacing
- fixed infrastructure, road-mobile, rail-mobile, rough terrain
- explosive atmosphere in dedicated cabinets with additional protection

Elio



Overhead crane specialist

- 12 relays
- 3 inputs (2 logic | 1 ana)
- Protocols: 1

Alto



Multifunction specialist

- 38 relays
- 42 inputs (36 logic | 6 ana)
- Protocols: 1

Timo



Vehicle specialist

- 6 logic or PWM outputs
- 2 analog outputs
- 3 inputs (2logic/1ana)
- Protocols: 1 | 2

Nemo



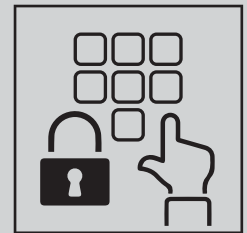
Industrial automation specialist

- Protocols: 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8

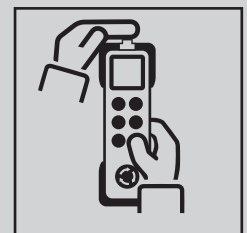
Protocols Overview

- 1) Modbus
- 2) CANopen
- 3) DeviceNET
- 4) EtherNet/IP
- 5) PROFIBUS
- 6) PROFINET
- 7) Ethernet Powerlink
- 8) EtherCAT

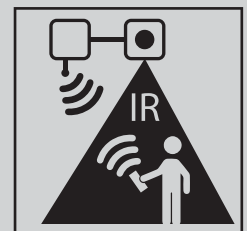
Further enhance safety



PIN access code for authorized operators only



Combined pushbuttons for commands confirmation



Additional infrared link to ensure that:

- the operator stays within working area
- the right equipment has been selected



Safety Radio Remote Controls Gama Series

- Do you need a high level of safety to protect people ?
- Is your application very specific ?
- Is your process complex ?
- Do you operate in a harsh environment ?
- Do you prefer pushbutton operation ?
- Do you face explosion risks ?

The Gama Series offers safe and robust pushbutton solutions to fulfill heavy-duty work requirements.

ATEX versions with a grey casing, will even operate safely under permanent risk of explosion (gas: zone 0, dust: zone 20).



Gama 10

Gama 6



Multimode management

Multiple screen pages where each function button is allocated to a specific command.

For sure, with Gama 6 or 10 buttons, you will have enough!

Ergonomic

- Strong pushbutton tactile feedback even when wearing thick gloves
- Buttons laid out to prevent undesired commands



Easy to set-up, easy to maintain through iDialog

- Click & set programming for straight 1 button = 1 function
- Store your configuration file and keep it confidential if needed
- Instant start of a new device: just upload the configuration file in it!
- Broad range of spare parts for extended lifetime

Accessible sophistication through iDialog

- Multimode management for screen display to fit on-going processing step
- Multiple conditions programming and value scaling
- Allow for external automation system control of radio behavior according to process values and external sensor data





Receivers for Gama Series

4 receivers and their many options adapt to a broad range of equipment:

- power wire or industrial bus interfacing
- fixed infrastructure, road-mobile, rail-mobile, rough terrain
- explosive atmosphere in dedicated cabinets with additional protection

Elio



Overhead crane specialist

- 12 relays
- 3 inputs (2 logic | 1 ana)
- Protocols: 1

Alto



Multifunction specialist

- 38 relays
- 42 inputs (36 logic | 6 ana)
- Protocols: 1

Timo



Vehicle specialist

- 6 logic or PWM outputs
- 2 analog outputs
- 3 inputs (2logic/1 ana)
- Protocols: 1 | 2

Nemo



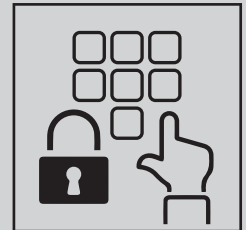
Industrial automation specialist

- Protocols: 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8

Protocols Overview

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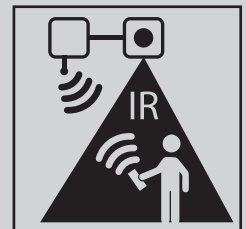
Further enhance safety



PIN access code for authorized operators only



SIL 2 – PLd safety level pushbuttons with redundant optical cells to work in high danger environments (overhead cranes in foundries, robotized production cells, ...)



Additional infrared link to ensure that:

- the operator stays within working area
- the right equipment has been selected



Safety Radio Remote Controls Pika & Moka Series

Do you need a high level of safety to protect people?
Is your application very specific?
Is your process complex ?
Do you need to control motion with high accuracy ?
You face explosion risks ?

The Pika and Moka series offer safe and accurate bellyboxes solutions to control complex equipment.

ATEX versions with a grey casing, it will even operate safely under permanent risk of explosion (gas: zone 0, dust: zone 20).



Pika

Moka



Multimode management

Multiple screen pages where each joystick, lever, button, toggle or switch is allocated to a specific command.
Let's get creative!

Ergonomic

- Wide range of joysticks, pushbutton, toggle and selector variants for best use and comfort
- Levers available on Moka for one directional proportional control

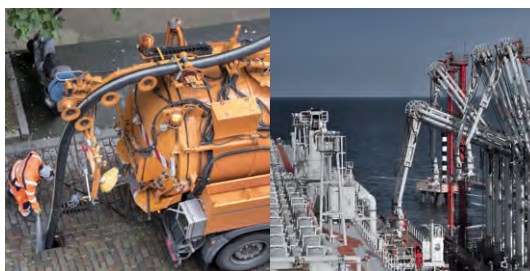
Easy to set-up, easy to maintain through iDialog

- Click & set programming for straight 1 button = 1 function
- Store your configuration file and keep it confidential if needed
- Instant start of a new device: just upload the configuration file in it!
- Broad offer of spare parts for extended lifetime



Accessible sophistication through iDialog

- Multimode management for screen display to fit on-going processing step
- Multiple conditions programming and value scaling
- Allow an external automation system control of radio system behavior according to process values and external sensor data





Receivers for Pika & Moka Series

4 receivers and their many options adapt to a broad range of equipment:

- power wire or industrial bus interfacing
- fixed infrastructure, road-mobile, rail-mobile, rough terrain
- explosive atmosphere in dedicated cabinets with additional protection

Elio



Overhead crane specialist

- 12 relays
- 3 inputs (2 logic | 1 ana)
- Protocols: 1

Alto



Multifunction specialist

- 38 relays
- 42 inputs (36 logic | 6 ana)
- Protocols: 1

Timo



Vehicle specialist

- 6 logic or PWM outputs
- 2 analog outputs
- 3 inputs (2logic/1 ana)
- Protocols: 1 | 2

Nemo



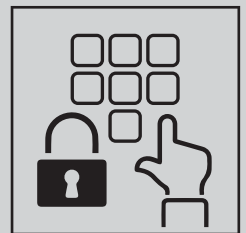
Industrial automation specialist

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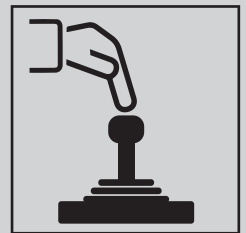
Protocols Overview

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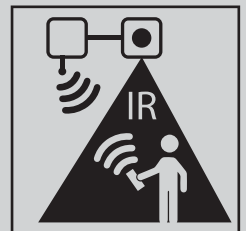
Further enhance safety



PIN access code for authorized operators only



Pushbutton joystick for commands confirmation



Additional infrared link to ensure that:

- the operator stays within working area
- the right equipment has been selected

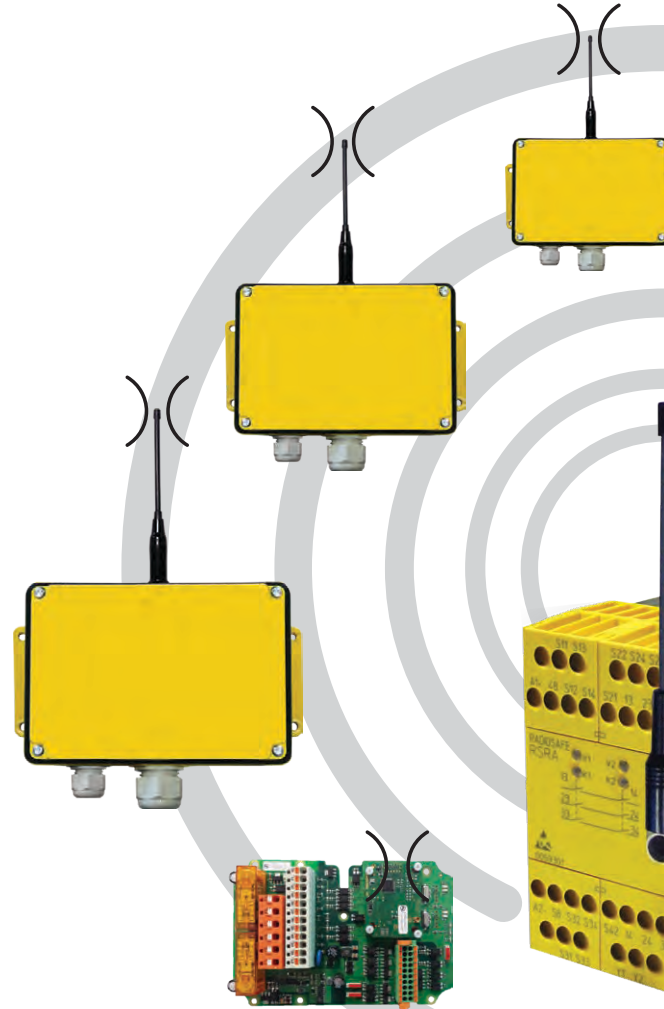
Safety Radio Remote Controls

RadioSafe Series

The RadioSafe series utilizes a SIL 3 – PLe wireless emergency stop to tackle critical dangers typically met in highly automatized factories / warehouses, robotized production cells, and continuous process lines.

Maintenance interventions under live conditions in normally blocked-access areas is a major challenge, particularly if a risk of electric shock exists.

The equipment to transport people requires the same level of safety: ski ropeways, amusement rides, lifting platforms.



Safe Stopping + Restarting of unlimited numbers of AGVs at once

Global safety

- much more than individual machines safety
- SIL 3-PLe TÜV Süd certified solution
- independent from any navigation solution
- operators absolute safety within fleets of AGVs

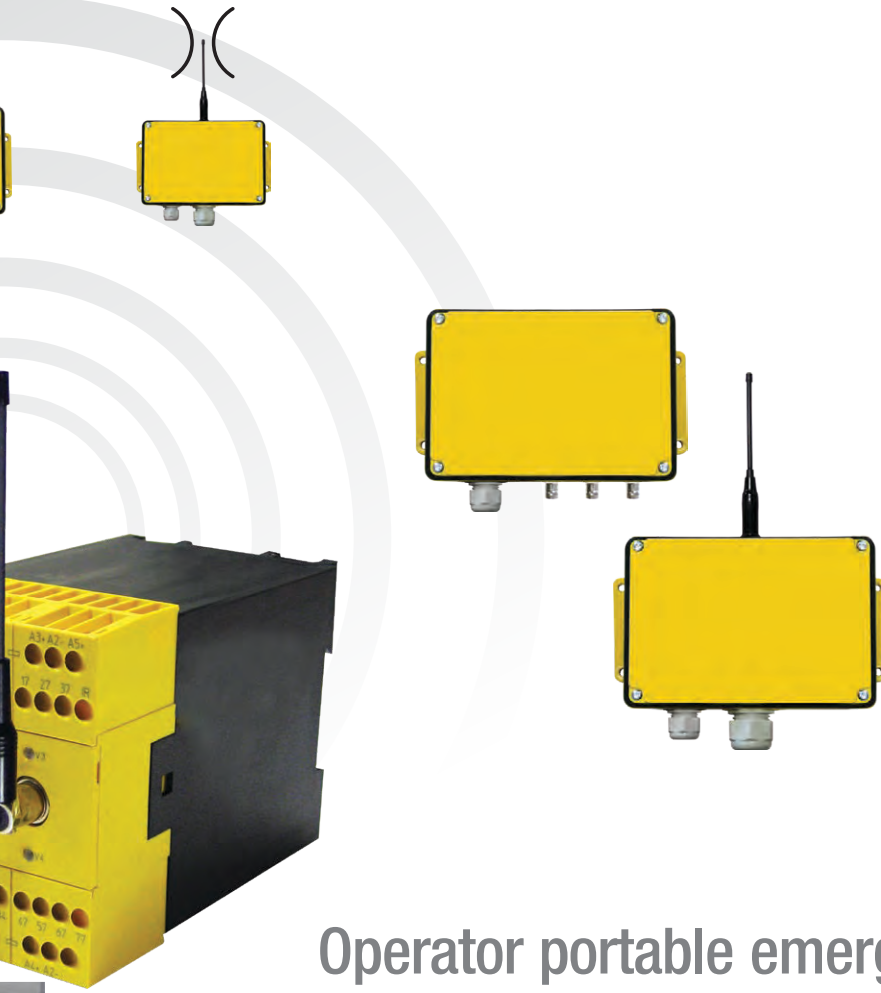
Controlled halt

- draw a « stop pattern » within a whole fleet of AGVs to create access evacuation routes
- keep track of AGVs exact locations even during the most critical circumstances

Global wireless productivity

- instantly restart an entire fleet of AGVs
- send dedicated commands to each machine
- remotely change parameters of all receivers
- upgrade installation throughout its lifecycle





Operator portable emergency stop

Access of technicians to the core of industrial machineries might be required:

- for maintenance or repair operations
- to setup and adjust a process with best efficiency

RadioSafe portable emergency stops steps up to the challenge of protecting them.



Validation handle*

A 3-step trigger allows normal operation while half-pressed. When released (fall, fear) or fully pressed (electric shock) processes stop immediately.

In addition, 4 function buttons allow commands to be sent to the machines.



Breast worn remote control

The emergency stop of a compact remote control is always within reach.

Both hands remain free to work.

In addition, 4 function buttons allow controlling equipment or process lines

* Not available in all regions. Please contact customer service or your local representative for more information.

Customized Services

Tailored all-in-one solutions

Conductix-Wampfler offers a complete range of services developed in consultation with our Customers.



Application support

- Recommendation of tailored-solutions
- Programming of customized configuration files
- Help defining receiver to machine wiring

Installation and commissioning

- Assistance to set-up / installation
- On-site intervention for the commissioning of complex installations
- Technical validation
- Fixing possible radio perturbations

Training

- Training sessions in our premises or in yours to bring you maximum autonomy
- Advanced maintenance training to qualify for the delivery of advanced level spare parts

Other Products from Conductix-Wampfler

The products described in this catalog represent a few of the products from the broad spectrum of Conductix-Wampfler components and systems for the transfer of energy, data, gases, and fluids. The solutions we deliver for your applications are based on your specific requirements. In many cases, a combination of several different Conductix-Wampfler products are needed to fill the application. You can count on all of Conductix-Wampfler's business units for hands-on engineering support - coupled with the perfect solution to meet your energy management and control needs.



Motor driven cable reels

Motor driven reels by Conductix-Wampfler are the perfect solution for managing long lengths of heavy cable and hoses in very demanding industrial applications. Monospiral, level wind, and random wind spools.



Slip ring assemblies

Whenever powered machinery needs to rotate 360°, field proven slip ring assemblies by Conductix-Wampfler can flawlessly transfer energy and data. Here, everything revolves around flexibility and reliability.



Conductor bar

Whether they are enclosed conductor rails, expandable single-pole bar systems, or high amperage bar for demanding steel mill use up to 6000 amps. Conductix-Wampfler's conductor bar is the proven solution to reliably move people and material.



Spring driven cable reels

We have 60 years experience and trusted brands such as Insul-8, Wampfler, and IER. We offer small cord reels all the way to large multi-motor units, a wide range of accessories, and hazardous location reels.



Cable Festoon systems

It's hard to imagine Conductix-Wampfler cable trolleys not being used in virtually every industrial application. They are reliable and robust and available in an enormous variety of sizes and models.



Push Button Pendants

Our ergonomic pendants are ideally suited for industrial control applications. They are available in a wide range of configurations for overhead cranes and other machinery.



Radio remote controls

Safe, secure, and reliable radios use the latest in microprocessor technology. Available in several models for overhead crane control and other types of machinery.



Inductive Power Transfer IPT®

The contact-less system for transferring energy and data. For all tasks that depend on high speeds and absolute resistance to wear.



Data Transfer: ProfiDAT® | Nexus

Safe & reliable wireless communication using slotted waveguide technology that's PROFIsafe compatible.

Nexus NB for narrow band signal transfer over power conductors



LJU Automation EMS Controller

Specialized controllers Programmable by parameters, Ideal for Electrified Monorails at automotive plants, with over 1500 in service worldwide. Adaptable for other applications



BridgeGuard™

Prevents crane to crane and crane to end collisions. IP69K rated for indoor and outdoor use, with a 3 ft to 150 ft range. Compliant with IEC 60068-2-6:2007



Air & Spring balancers | Air hoists

Conductix-Wampfler offers the full line of ENDO positioning devices. Rugged, reliable steel construction increasing safety and decreasing fatigue and body stress.

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