

# Jay Radio Remote Controls

## Beta | Gama | Pika | Moka Series



**CONDUCTIX**  
wampfler



COMPACT

EASY TO HANDLE

FLEXIBLE



# Beta

## TRANSMITTER

Beta transmitter adapts to the application to make the process more efficient. This easy-to-use handheld remote control gives incomparable freedom of movement, high motion accuracy and higher productivity while providing best operators' safety. With Beta transmitter, experience today's cutting-edge technology.

### MAIN FEATURES

- > Configurable, smart bi-directional radio link to exchange information while adapting to the radio environment.
- > User-friendly screen for look-up, selection, validation, configuration...
- > Compact, easy-to handle casing for one-hand control.
- > Quick and easy setup for application configuration thanks to **iDialog** software (labels, feedback, alarms, mapping actuators/outputs, interlocks, network features, access by PIN codes).
- > Easy to maintain thanks to its diagnosis aid system (screen message, iDialog analysis software).
- > 2 charging modes on Beta 6 + 4 model:
  - Rugged industrial charger for operator module,
  - Rugged industrial charger for battery.

### FULLY COMPLIANT WITH SAFETY AND SECURITY STANDARDS:

Machinery directive 2006/42/EC:

Emergency stop

> SIL 3 per EN 61508

> Performance level PL e

per EN ISO 13849-1 and -2

EC type certificate issued by TÜV

NORD



Radio and telecommunication terminal equipment

(low voltage, electromagnetic

compatibility, radio spectrum)


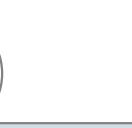


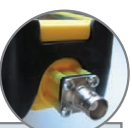
FCC part 15

ARCEP certificate

Radio Equipment Directive (RED)

# TRANSMITTER Beta



-   
 OPTIONAL STARTUP VALIDATION BY IR
- OR
-   
 OPTIONAL IR WORK AREA LIMITATION (A)
- OR
-   
 OPTIONAL PUSHBUTTON
- OR
-   
 OPTIONAL M12 INDUSTRIAL CONNECTOR TO CONNECT TWO DRY CONTACTS
- OR
-   
 OPTIONAL BNC ANTENNA CONNECTOR



BREATHABLE MEMBRANE TO PREVENT CONDENSATION



OPTIONAL BUZZER 80 DBA

TOUGH BACKLIT SCREEN WITH ANTI-REFLECTION, SHOCK-PROOF, ANTI-SCRATCHING FEATURES

MULTIMODES OPTION

INTEGRATED REINFORCED ABS AND PROTECTIVE FOAM

SEALS

NAVIGATION BUTTONS

CASING SHAPED TO PREVENT UNINTENTIONAL ACTIONS

LABELS FOR IDENTIFYING FUNCTIONS



OPTIONAL IR WORK AREA LIMITATION (B)

ON / VALIDATION BUTTON

HIGH-CAPACITY PLUG-IN BATTERY (6+2 MODEL)

EMERGENCY STOP PALMSWITCH SIL 3 - PL e

OPTION AUTOMATIC DETECTION OF INACTIVITY «DEAD MAN»

6+2 model

CARRYING STRAP

OPTIONAL VIBRATOR (ALARM)



SEALED USB INTERFACE FOR DIAGNOSIS, CONFIGURATION

## DESCRIPTION

The transmitter comes in two versions:

> « 2+2(a) »<sup>(a)</sup> transmitter with 2 function buttons<sup>(b)</sup>:

- 2 single-action pushbuttons

**OR** 2 double-action pushbuttons

> « 6+2 »<sup>(a)</sup> transmitter with 6 function buttons<sup>(b)</sup>:

- 6 single-action pushbuttons

**OR** 6 double-action pushbuttons

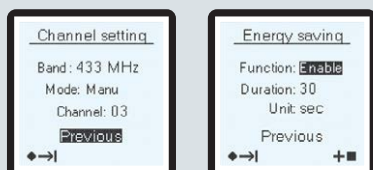
**OR** 4 double-action pushbuttons

+ 2 single-action pushbuttons  
(under the navigation buttons)

<sup>(a)</sup> Each version has 2 navigation pushbuttons

<sup>(b)</sup> The single-action pushbuttons can be configured as selectors for 2, 3 or «n» positions with status indication on the screen.

The screen on the transmitter allows configuring easily and choosing items such as:



> Screen language

> Receiver which you want to use

> Radio transmit frequency and power

> Duration of the « standby » time delay (automatically stops operator module and associated receiver if not used for a defined period of time)

> Operating modes of the equipment (32 max.)

**It also displays:**

- Battery charge level
- Radio communication
- Equipment labels and controlled functions (max 96 different labels for selectors)
- Equipment feedback (16 feedbacks max with 10 labels / feedback - 48 labels max in total)
- Alarms (8 for application use + 8 for system)

**Compatibility:**

These transmitters work with **Elio, Alto, Timo, Nemo** receivers to be defined according the application.

## TECHNICAL CHARACTERISTICS

### MECHANICAL CHARACTERISTICS AND ENVIRONMENTAL WITHSTAND CAPACITY

Housing material	shock-resistant reinforced ABS
Water tightness	IP65
Weight (with battery)	2 buttons: 400 g 6 buttons: 485 g
Dimensions	2 buttons: 182 x 75 x 50 mm 6 buttons: 235 x 75 x 50 mm
Storage	on charger support
Carrying	in carrying sleeve by 2-point shoulder strap by 3-point shoulder strap

### ENVIRONMENTAL WITHSTAND CAPACITY

Operating temperature	-20°C to + 50°C
Storage temperature without battery	-20°C to + 70°C
Battery storage temperature	-20°C to + 50°C

### ELECTRICAL AND RADIO CHARACTERISTICS

Power supply	Li-ion battery
Autonomy (25°C) radio with activated	
100% time	10 hours
Frequency selection	64 frequencies for 433-434 MHz
Manual / automatic	12 frequencies for 869 MHz 64 frequencies for 911-918 MHz
Emission power	< 10 mW (license free)
Range limitation	Selectable 10 levels of power
Modulation	FM
Average range <sup>(1)</sup>	100 m in industrial environment <sup>(1)</sup> 300 m in open space <sup>(1)</sup>
Charging time (autonomy > 80%)	3 hr (20 min of charge provides 1 hr autonomy)
Charging temperature range	0°C to + 40°C

### FUNCTIONAL CHARACTERISTICS

Display	Backlit LCD, 128 x 128 pixels 42mm (W) x 40mm (H)
USB interface for configuration and diagnostics	mini-B 5-point USB connector Easy access in a compartment on the backside of the transmitter
Operating indications	Displayed on screen (radio link status, battery status, status of buttons, information feedbacks...)
Function buttons	2 or 6 pushbuttons (available as single or double-action buttons and configurable as selectors with n positions)
Navigation and buttons	2 pushbuttons configure the product 1 On / Validation button (for startup and validation of menus on screen)
Emergency stop	2 positions with rotary unlock system
Standby function	User-defined time delay (from 1 s to infinity)

<sup>(1)</sup> Range varies according to environment conditions around transmitter and reception antenna (steel works, metal walls, etc.).

## ADVANCED OPTIONS

### STARTUP VALIDATION BY IR

Startup of the remote-controlled equipment can be secured by adding an IR startup feature.

- To start the equipment, the operator must point the module in the direction of the PWT20 IR module(s) mounted on the equipment to control. The "Transmitter / Equipment controlled" match-up takes place with no possibility of error.

- The IR startup feature has a range of 0 to 20 m (see fig. A).

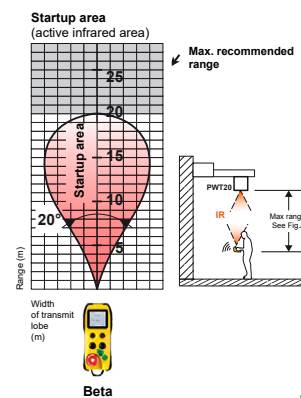


Fig. A

### LIMITATION OF ACTION AREA BY INFRARED

The transmitter work features with an IR emission function which detects an operator in the IR working area. Operator safety is ensured since the operator is required to work in the IR area.

The maximum guaranteed work distance between PWT20 IR modules and the transmitter is 20 meters (see fig.A) or 8 meters (see fig.B).

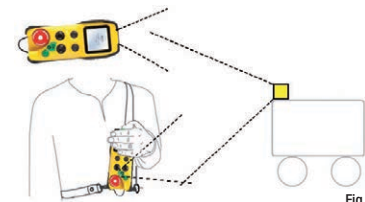


Fig. B

### C16 INDUSTRIAL CONNECTOR FOR 2 DRY CONTACTS

- 4 connection terminals
- switching capacity < 10 mA
- female socket
- supplied with cap

ACCESSORIES



Standard charger for Beta 2+2 or Beta 6+2 transmitters

Standard version references

PWCB020  
PWCB060

Dimensions: • 220 x 82 x 76 mm  
• 272 x 82 x 76 mm

Power supply: 12/24 Vdc  
Power: 7 W

References for version with 2 relays + 1 logic input + buzzer

PWCB021  
PWCB061

References version with 1 relay + 4 logic inputs + buzzer

PWCB022  
PWCB062

Mechanical support for Beta 6+2 transmitter

Reference: PWCB06M

Dimensions: 272 x 82 x 76 mm

Battery charger

Reference: PWC

Dimensions: 170 x 65 x 36 mm  
Power supply: 12/24 Vdc  
Power: 7 W

Plug-in Li-ionbattery for Beta 6+2 transmitter

Reference: PWB

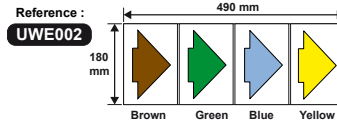
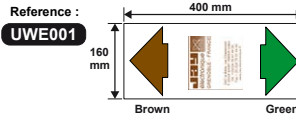
Dimensions : 57 x 56 x 16 mm  
Voltage: 3,7 V  
Capacity: 1900 mAh

Built-in battery for Beta 2 transmitter

Voltage: 3,7 V

Capacity: 1700 mAh

Sheet of adhesive labels for mobile equipments



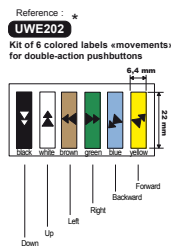
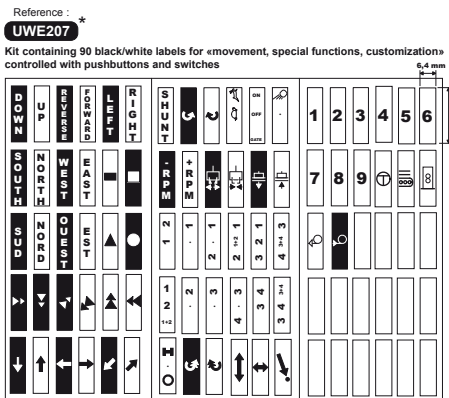
M12 female 4/5 points cable

Reference: PWM201

Length: 2 m

Sheet of adhesive labels for otransmitter

The function buttons are identified by adhesive labels in the recesses in the transmitter casing next to the pushbuttons.



Mains power adapter for battery charger

Reference: UBCU

Dimensions: 41 x 72 x 39 mm  
Power supply: 100-240 Vac  
Output: 12 Vdc  
Power: 7 W



Cigarette lighter plug adapter for battery charger

Reference: PWA4

Dimensions: 90 x 20 x 20 mm  
Power supply: 12-24 Vdc  
Output: Power supply



Removable 2-point shoulder strap

Reference: UWE102

Removable 3-point shoulder strap

Reference: UWE104

Carrying sleeve for Beta 2+2 module

Reference: PWM107

Carrying sleeve for Beta 2+2 transmitter

Reference: PWM108



Carry strap wrist

Reference: PWM111

Protective Case for Beta 6

Reference: PWM106

Cover and protection for carrying Beta 6+2

Reference: PWM102



ROBUST

ERGONOMIC

SECURE



# Gama

## TRANSMITTER

Gama transmitter adapts to the application to make the process more efficient. This easy-to-use handheld module gives incomparable freedom of movement, and higher productivity while providing best high motion accuracy operators' safety. With Gama transmitter, experience today's cutting-edge technology.

### MAIN FEATURES

- > Configurable, smart bi-directional radio link exchanges information while adapting to the radio environment.
- > User-friendly screen for look-up, selection, validation, configuration...
- > Ergonomic casing and buttons, even when wearing thick gloves.
- > Function buttons designed to SIL 2 per EN 61508 and PL d per EN ISO 13849.
- > Quick and easy setup for application configuration thanks to **iDialog** software (labels, feedback, alarms, mapping actuators/outputs, interlocks, network features, access by PIN codes).
- > Easy to maintain thanks to its diagnosis aid system (on screen message, iDialog analysis software).
- > 2 charging modes on Gama:
  - Rugged industrial charger for operator module,
  - Rugged industrial charger for battery.

### FULLY COMPLIANT WITH SAFETY AND SECURITY STANDARDS:

Machinery directive 2006/42/EC:

Emergency stop

> SIL 3 per EN 61508

> Performance level PL e

per EN ISO 13849-1 and -2

EC type certificate issued by TÜV

NORD



Radio and telecommunication terminal equipment

(low voltage, electromagnetic

compatibility, radio spectrum)

FCC part 15

ARCEP certificate

Radio Equipment Directive (RED)

TRANSMITTER  
Gama



MULTIMODES  
OPTIONS

OPTIONAL STARTUP  
VALIDATION BY IR

SEALED USB PORT  
FOR DIAGNOSIS,  
CONFIGURATION



BIDIRECTIONAL  
RADIO LINK

2 ATTACHMENT POINTS  
FOR  
SHOULDER STRAPS

INTEGRATED REINFORCED  
ABS AND PROTECTION  
FOAM

SEALS

FUNCTION BUTTON SIL  
2 - PL d

CASING SHAPED  
TO PREVENT  
UNINTENTIONAL ACTIONS

NAVIGATION  
BUTTONS

TOUGH BACKLIT SCREEN  
WITH  
ANTI-REFLECTION,  
SHOCK-PROOF,  
ANTI-SCRATCHING  
FEATURES

LARGE-SIZED  
EASY-TOUCH CONTROL  
BUTTONS:  
FOR EASY USE  
WITH GLOVES  
TO PREVENT  
MUSCULO-SKELETAL  
DISORDER (MSD)

OPTIONAL  
ANTI-ZAPPING  
FUNCTION

LABELS FOR IDENTIFYING  
FUNCTIONS

BREATHABLE  
MEMBRANE  
TO PREVENT  
CONDENSATION

ON / VALIDATION BUTTON

OPTIONAL VIBRATOR  
(ALARM)



HIGH-CAPACITY  
PLUG-IN BATTERY

EMERGENCY STOP  
PALMSWITCH  
SIL 3 - PL e

6+2 MODEL

10+2 MODEL



# TRANSMITTER Gama

## DESCRIPTION

The transmitter comes in two versions:

> «6+2»<sup>(a)</sup> transmitter with 6 function buttons<sup>(b)</sup>:

- 6 single-action pushbuttons
- OR 6 double-action pushbuttons
- OR 4 double-action pushbuttons + 2 single-action pushbuttons (under the display)

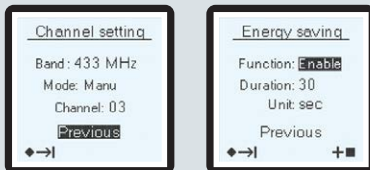
> «10 +2»<sup>(a)</sup> transmitter with 10 function buttons<sup>(b)</sup>:

- 10 single-action pushbuttons
- 10 double-action pushbuttons
- OR 6 double-action pushbuttons
- OR + 4 single-action pushbuttons (under the display)
- OR 8 double-action pushbuttons + 2 single-action pushbuttons (under the display)

<sup>(a)</sup> Each version has 2 navigation pushbuttons.

<sup>(b)</sup> The single-action pushbuttons can be configured as selectors for 2, 3 or «n» positions with status indication on the screen.

The screen on the transmitter allows configuring easily and choosing items such as:



- > Screen language
- > Receiver which you want to use
- > Radio transmit frequency and power
- > Duration of the « standby » time delay (automatically stops transmitter and associated receiver if not used for a defined period of time)
- > Operating modes of the equipment (32 max.)

It also displays:

- Battery charge level
- Radio communication
- Equipment labels and controlled functions (max 96 different labels for selectors)
- Equipment feedback (16 feedbacks max with 10 labels / feedback - 48 max labels in total)
- Alarms (8 for application use + 8 for system)

### Compatibility:

These transmitters work with **Elio, Alto, Timo Nemo** receivers to be defined according the application.

## TECHNICAL CHARACTERISTICS

### MECHANICAL CHARACTERISTICS AND ENVIRONMENTAL WITHSTAND CAPACITY

Housing material	shock-resistant reinforced ABS
Water tightness	IP65
Weight (with battery)	6 buttons: 768 g 10 buttons: 893g
Dimensions	6 buttons: 290 x 93 x 64 mm 10 buttons: 360 x 93 x 64 mm
Storage	on charger support
Carried	by 2-point shoulder strap

### ENVIRONMENTAL WITHSTAND CAPACITY

Operating temperature range	-20°C to + 50°C
Storage temperature without battery	-20°C to + 70°C
Battery storage temperature	-20°C to + 50°C

### ELECTRICAL AND RADIO CHARACTERISTICS

Power supply	Li-ion battery
Autonomy (25°C) with radio link activated 100% time	10 hours
Frequency selection	64 frequencies for 433-434 MHz band 12 frequencies for 869 MHz band 64 frequencies for 911-918 MHz band
Manual / automatic	
Emission power	<10 mW (license free)
Range limitation	10 selectable levels of power
Modulation	FM
Average range <sup>(1)</sup>	100 m in industrial environment <sup>(1)</sup> 300 m in open space <sup>(1)</sup>
Charging time (endurance > 80%)	3 hr (20 min of charge provides 1 hr autonomy)
Charging temperature range	0°C to + 40°C

### FUNCTIONAL CHARACTERISTICS

Display	Backlit LCD, 128 x 128 pixels 42mm (W) x 40mm (H)
USB interface for configuration and diagnosis	mini-B 5-contact USB connector Easy access in a compartment on the backside of transmitter
Operating indications	Displayed on screen (radio link status, battery status, status of buttons, information feedbacks...)
Function buttons	6 or 10 pushbuttons (available as single or double-action buttons and configurable as selectors with n positions) 0 14 mm - travel 7 mm Endurance: 1 million cycles for 1st level pushbutton action 500 000 cycles for 2nd level pushbutton action
Navigation and startup buttons	2 pushbuttons to configure the product (above the emergency stop palmswitch) On / Validation button (for startup and validation of menus on screen) Endurance: 500 000 cycles
Emergency stop	2 positions with rotary unlock system
Standby function	User-defined time delay (from 1 s to infinity)

<sup>(1)</sup> Range varies according to environment conditions around transmitter and reception antenna (steel works, metal walls, etc...).

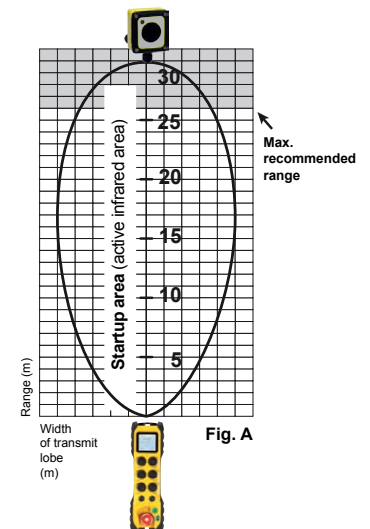
## ADDITIONAL OPTIONS

### STARTUP VALIDATION BY IR

Startup of the remote-controlled equipment can be secured by adding an IR startup feature.

- To start the equipment, the operator must point the module in the direction of the PWT20 IR module(s) mounted on the equipment to control. The "transmitter / Equipment controlled" match-up takes place with no possibility of error.

- The IR startup feature has a range of 26 m (see fig. A).



ACCESSORIES



Standard charger for Gama 6+2 or Gama 10+2 transmitters

References for basic version

PWCG060  
PWCG100

Dimensions: • 355 x 94 x 96 mm  
• 428 x 94 x 96 mm

Power supply: 12/24 Vdc  
Power: 7 W

References for version with 2 relays + 1 logic input + buzzer

PWCG061



Battery charger

Reference: PWC  
Dimensions: 170 x 65 x 36 mm  
Power supply: 12/24 Vdc  
Power: 7 W

Plug-in battery

Reference: PWB  
Dimensions: 57 x 56 x 16 mm  
Voltage: 3,7 V  
Capacity: 1900 mAh



Mains adapter for battery charger

Reference: UBCU  
Dimensions: 41 x 72 x 39 mm  
Power supply: 115-230 Vac  
Output: 12 Vdc  
Power: 7 W



Removable 2-point shoulder strap

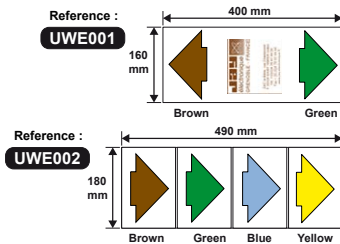
Reference: UWE102



Cigarette lighter plug adapter for battery charger

Reference: PWA4  
Dimensions: 90 x 20 x 20 mm  
Power supply: 12-24 Vdc  
Output: Power supply

Sheet of adhesive labels for mobile equipments



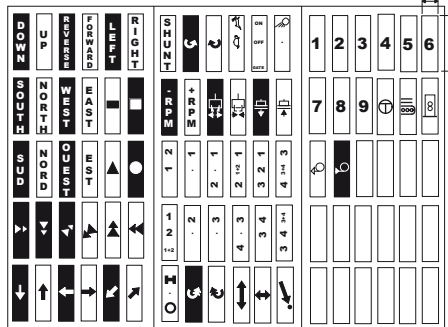
Sheet of adhesive labels for transmitters

The function buttons are identified by adhesive labels in the recesses provided in the transmitter casing next to the pushbuttons.

Reference : \*

UWE207

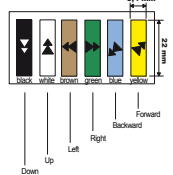
Kit containing 90 black/white labels for «movement, special functions, customization» controlled with pushbuttons and switches



Reference : \*

UWE202

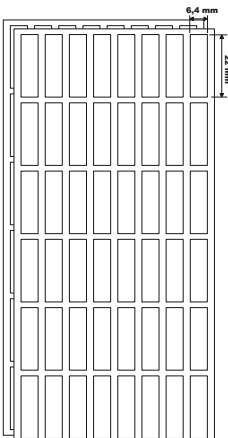
Kit of 6 colored labels «movements» for double-action pushbuttons



Reference :

UWE205

Kit containing 48 white blank labels + 48 transparent protecting labels for customised markings



\* = standard sheet of labels supplied with operator module

COMPACT

ERGONOMIC



# Pika

## TRANSMITTER

Pika transmitter adapts to the application to make the process more efficient. This easy-to-use remote control gives incomparable freedom of movement, high motion accuracy, and higher productivity while providing best operators' safety. With Pika transmitter, experience today's cutting-edge technology.

### MAIN FEATURES

- > Configurable, smart bi-directional radio link to exchange information while adapting to the radio environment.
- > User-friendly screen display for look-up, selection, validation, configuration...
- > Compact, super-ergonomic unit.
- > Quick and easy setup for application configuration thanks to **iDialog** software (labels, feedback, alarms, mapping actuators/outputs, interlocks, network features, access by PIN codes).
- > Easy to maintain thanks to its diagnosis aid system (on screen message, iDialog analysis software).
- > Plug-in battery and industrial charger.

### FULLY COMPLIANT WITH SAFETY AND SECURITY STANDARDS:

Machinery directive 2006/42/EC:

Emergency stop

> SIL 3 per EN 61508

> Performance level PL e

per EN ISO 13849-1 and -2

EC type certificate issued by TÜV

NORD



Radio and telecommunication terminal equipment

(low voltage, electromagnetic

compatibility, radio spectrum)

FCC part 15

ARCEP certificate

Radio Equipment Directive (RED)

# TRANSMITTER Pika



BIDIRECTIONAL  
RADIO LINK

OPTIONAL  
STARTUP VALIDATION  
BY IR  
OPTIONAL  
WORK AREA  
LIMITATION

OPTIONAL  
CROSS-LOCKING  
SYSTEM

OPTIONAL  
PERSONALIZED FRONT  
PLATE

STANDARD  
JOYSTICKS WITH  
1 TO 4 NOTCHES  
OR PROPORTIONAL  
CONTROL

OPTIONAL SECURE  
INTENTIONAL-ACTION  
JOYSTICKS

EMERGENCY STOP  
PALMSWITCH  
SIL 3 - PL e

TOUGH BACKLIT SCREEN  
WITH  
ANTI-REFLECTION,  
SHOCK-PROOF,  
ANTI-SCRATCHING  
FEATURES

MULTIMODES  
OPTION

4 FUNCTION  
BUTTONS

ON / VALIDATION  
BUTTON

NAVIGATION  
BUTTONS



POSITIONS FOR  
« TOGGLE » SWITCHES

## 1-JOYSTICK MODEL



OPTIONAL  
INDUSTRIAL  
CONNECTOR  
C16 / 4 POINTS  
TO CONNECT  
2 DRY CONTACTS  
OR  
C16 / 7 POINTS  
FOR WIRE  
CONNECTION  
WITH TIMO, NEMO, ALTO

OPTIONAL  
AUXILIARY  
PUSHBUTTON

OPTIONAL  
AUTOMATIC DETECTION  
OF INACTIVITY  
«DEAD MAN»

## 2-JOYSTICK MODEL

FUNCTION LABELS

SEALED USB  
INTERFACE  
FOR DIAGNOSIS,  
CONFIGURATION

HIGH-CAPACITY  
PLUG-IN BATTERY

OPTIONAL VIBRATOR  
(ALARM)

BREATHABLE MEMBRANE  
TO PREVENT CONDENSATION

DESCRIPTION

The transmitter comes with:

- > **Transmitter<sup>(a)</sup> with 1 joystick or 2 joysticks:**  
4 function pushbuttons<sup>(b)</sup>  
+ 2 positions for additional switches<sup>(c)</sup>

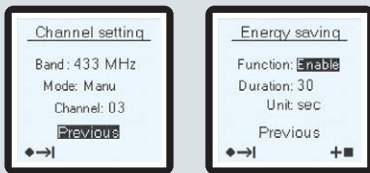
<sup>(a)</sup> Each version has 2 navigation pushbuttons,  
1 «On/Validation» pushbutton and 1 emergency stop palmswitch.

<sup>(b)</sup> The single-action pushbuttons can be configured as selectors for 2, 3 or «n» positions with status indication on the screen.

<sup>(c)</sup> You can choose from among the following control components :

- key selector switches
- selector switches with 2 fixed positions
- 2-position buttons with return to initial position
- selector switches with 3 fixed positions
- 3-position buttons with return to initial position
- 3-position buttons with 2 fixed positions + 1 return to initial position
- rotary selector switches with 4 to 12 positions
- potentiometer

The screen on the transmitter allows configuring easily and choosing items such as:



- > Screen language
- > Transceiver which you want to use
- > Radio transmit frequency and power
- > Duration of the « standby » time delay (automatically stops transmitter and associated receivers if not used for a defined period of time)
- > Operating modes of the equipment (32 max.)

**It also displays:**

- Battery charge level
- Radio communication
- Equipment labels and controlled functions (max 96 different labels for selectors)
- Equipment feedback (16 feedbacks max with 10 labels / feedback - 48 labels max in total)
- Alarms (8 for application use + 8 for system)

**Compatibility:**

These transmitters work with **Elio, Alto, Timo, Nemo** receivers to be defined according the application.

TECHNICAL CHARACTERISTICS

**MECHANICAL CHARACTERISTICS AND ENVIRONMENTAL WITHSTAND CAPACITY**

Housing material	shock-resistant polyamide
Water tightness	IP65
Weight (with battery)	1 joystick: 1300 g 2 joysticks: 1400 g
Dimensions	243 x 180 x 170 mm
Carried	by carrying belt by 2-point shoulder strap

**ENVIRONMENTAL WITHSTAND CAPACITY**

Operating temperature	-20°C to + 50°C
Storage temperature without battery	-20°C to + 70°C
Battery storage temperature	-20°C to + 50°C

**ELECTRICAL AND RADIO CHARACTERISTICS**

Power supply	Li-ion battery
Autonomy (25°C) with radio, activated 100% time	10 hours
Frequency selection	64 frequencies for 433-434 MHz band 12 frequencies for 869 MHz band 64 frequencies for 911-918 MHz band
Manual / automatic	
Emission power	<10 mW
Range limitation	10 selectable levels of power
Modulation	FM
Average range <sup>(1)</sup>	100 m in industrial space <sup>(1)</sup> 300 m in open space <sup>(1)</sup>
Charging time (autonomy > 80%)	3 hr (20 mn of charge get 1hr autonomy)
Charging temperature range	0°C to + 40°C

**FUNCTIONAL CHARACTERISTICS**

Display	Backlit LCD display, 128 x 128 pixels 42mm (W) x 40mm (H)
USB interface for configuration and diagnosis	mini-B 5-point USB connector Easy access in a compartment on the level side of transmitter
Operating indications	On screen (radio link status, battery status, status of buttons, information feedbacks...)
Function buttons	4 pushbuttons (mounted around the screen) + 2 positions for switches
Navigation and startup buttons	2 pushbuttons to configure the product 1 On/Validation button (for startup and validation of menus on screen)
Emergency stop	2 positions with rotary unlock system
Standby function	User-defined time delay (from 1 s to infinity)

<sup>(1)</sup> Range varies according to environment conditions around transmitter and reception antenna (steel works, metal walls, etc.).

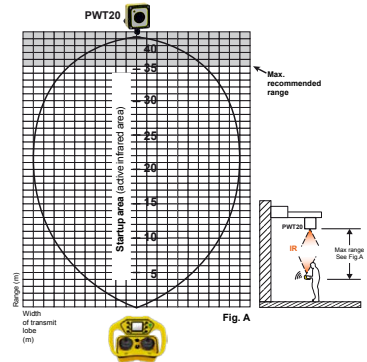
ADDITIONAL OPTIONS

**STARTUP VALIDATION BY IR**

Startup of the remote-controlled equipment can be secured by adding an IR startup feature.

- To start the equipment, the operator must point the module in the direction of the PWT20 IR module(s) mounted on the equipment to control. The «Transmitter / Equipment controlled» match-up takes place with no possibility of error.

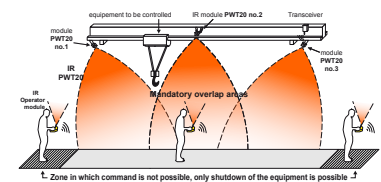
- The IR startup feature has a range of 35 m (see fig. A).



**LIMITATION OF ACTION AREA BY INFRARED**

The transmitter features an IR emission function which detects an operator in the IR working area. Operator safety is ensured since the operator is required to work in the IR area.

The maximum guaranteed work distance between PWT20 IR modules and the transmitter is 35 meters.



**C16 INDUSTRIAL CONNECTOR FOR 2 DRY CONTACTS**

- 4 connection terminals
- switching capacity < 10 mA
- female socket
- supplied with cap

**C16 INDUSTRIAL CONNECTOR FOR WIRE CONNECTION**

- 7 connection terminals
- male socket
- supplied with cap

## ACCESSORIES



### Battery charger

Reference: PWC  
 Dimensions: 170 x 65 x 36 mm  
 Power supply: 12/24 Vdc  
 Power: 7 W

### Plug-in battery for transmitter

Reference: PWB  
 Dimensions: 57 x 56 x 16 mm  
 Voltage: 3,7 V  
 Capacity: 1900 mA  
 Technology: lithium ion



### Mains adapter for battery charger

Reference: UBCU  
 Dimensions: 41 x 72 x 39 mm  
 Power supply: 115 - 230 Vac  
 Output: 12 Vdc  
 Power: 7 W



### Cigarette lighter plug adapter for battery charger

Reference: PWA4  
 Dimensions: 90 x 20 x 20 mm  
 Power supply: 12 - 24 Vdc  
 Output: Power supply



Removable 2-point  
 shoulder strap  
 Reference: UWE102



Carrying belt  
 Reference: PWM103



Key switch No. 2D138 diameter  
 22 for cabinet  
 Reference: PWE01



Cable for wire connection  
 between transmitter and receiver  
 Reference: PWL010  
 Length: 10 meters  
 Equipped with a C16 female  
 connector on one side and a C16  
 male connector on the other side

C16 male 4 points industrial  
 connector Kit to be screwed  
 Reference: PWM202

MODULAR

MULTIFUNCTION

# Moka

## TRANSMITTER

Moka transmitter adapts to the application to make the process more efficient. This easy-to-use remote control gives incomparable freedom of movement, high motion accuracy, and higher productivity while providing best operators' safety. With Moka transmitter, experience today's cutting-edge technology.

### MAIN FEATURES

- > Configurable, smart bi-directional radio link to exchange information while adapting to the radio environment.
- > User-friendly screen display for look-up, selection, validation, configuration...
- > Modular unit with wide ranging choice of functions.
- > Quick and easy setup for application configuration thanks to **iDialog** software (labels, feedback, alarms, mapping actuators/outputs, interlocks, network features, access by PIN codes).
- > Easy to maintain thanks to its diagnosis aid system (on screen message, iDialog analysis software).
- > Plug-in battery and rugged industrial charger.

### FULLY COMPLIANT WITH SAFETY AND SECURITY STANDARDS:

Machinery directive 2006/42/EC:

Emergency stop

> SIL 3 per EN 61508

> Performance level PL e

per EN ISO 13849-1 and -2

EC type certificate issued by TÜV

NORD



Radio and telecommunication terminal equipment

(low voltage, electromagnetic

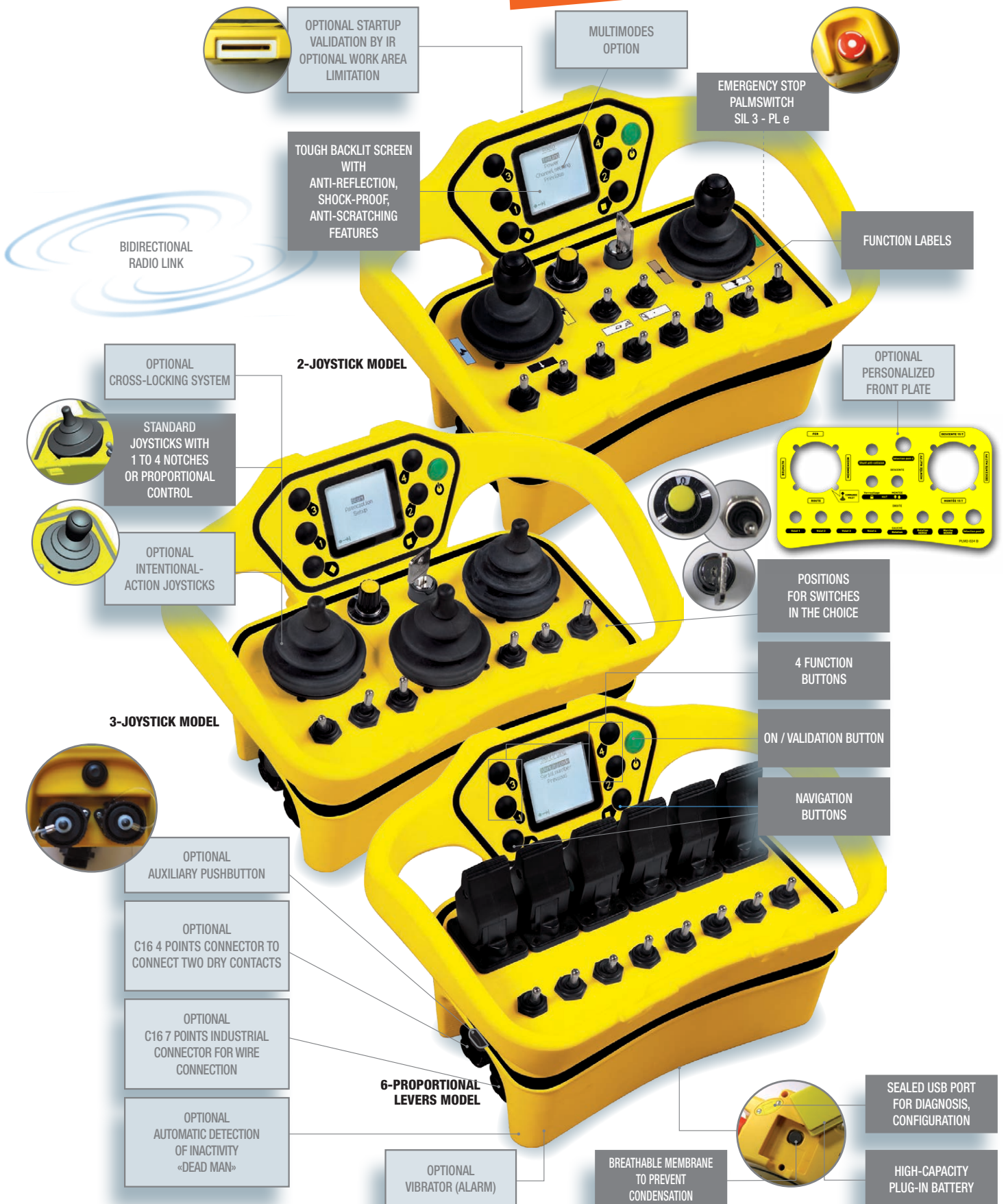
compatibility, radio spectrum)

FCC part 15

ARCEP certificate

Radio Equipment Directive (RED)

# TRANSMITTER Moka



OPTIONAL STARTUP  
VALIDATION BY IR  
OPTIONAL WORK AREA  
LIMITATION

MULTIMODES  
OPTION



EMERGENCY STOP  
PALMSWITCH  
SIL 3 - PL e

TOUGH BACKLIT SCREEN  
WITH  
ANTI-REFLECTION,  
SHOCK-PROOF,  
ANTI-SCRATCHING  
FEATURES

FUNCTION LABELS



BIDIRECTIONAL  
RADIO LINK

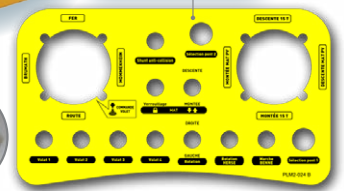
### 2-JOYSTICK MODEL

OPTIONAL  
CROSS-LOCKING SYSTEM

OPTIONAL  
PERSONALIZED  
FRONT PLATE



STANDARD  
JOYSTICKS WITH  
1 TO 4 NOTCHES  
OR PROPORTIONAL  
CONTROL



OPTIONAL  
INTENTIONAL-  
ACTION JOYSTICKS

POSITIONS  
FOR SWITCHES  
IN THE CHOICE

4 FUNCTION  
BUTTONS

### 3-JOYSTICK MODEL

ON / VALIDATION  
BUTTON

NAVIGATION  
BUTTONS



OPTIONAL  
AUXILIARY PUSHBUTTON

OPTIONAL  
C16 4 POINTS CONNECTOR TO  
CONNECT TWO DRY CONTACTS

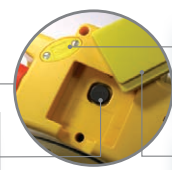
OPTIONAL  
C16 7 POINTS INDUSTRIAL  
CONNECTOR FOR WIRE  
CONNECTION

OPTIONAL  
AUTOMATIC DETECTION  
OF INACTIVITY  
«DEAD MAN»

### 6-PROPORTIONAL LEVERS MODEL

OPTIONAL  
VIBRATOR (ALARM)

BREATHABLE MEMBRANE  
TO PREVENT  
CONDENSATION



SEALED USB PORT  
FOR DIAGNOSIS,  
CONFIGURATION

HIGH-CAPACITY  
PLUG-IN BATTERY



## DESCRIPTION

The transmitter comes with:

- **Transmitter<sup>(a)</sup> with 2 joysticks:**  
4 function pushbuttons<sup>(b)</sup>  
+ 12 positions additional switches<sup>(c)</sup>
- **Transmitter<sup>(a)</sup> with 3 joysticks:**  
4 function pushbuttons<sup>(b)</sup>  
+ 8 positions for additional switches<sup>(c)</sup>
- **Transmitter<sup>(a)</sup> with 6 proportional levers:**  
4 function pushbuttons<sup>(b)</sup>  
+ 8 positions for additional switches<sup>(c)</sup>
- **Autres configurations en spécial**

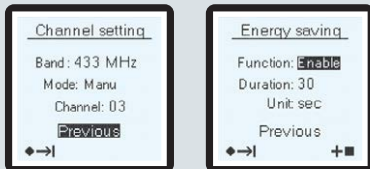
<sup>(a)</sup> Each version has 2 navigation pushbuttons, 1 On / Validation» pushbutton and 1 emergency stop palmswitch.

<sup>(b)</sup> The pushbuttons can be configured as selectors for 2, 3 or «n» positions with status indication on the screen.

<sup>(c)</sup> Choose among the following control components:

- key selector switches
- selector switches with 2 fixed positions
- 2-position buttons with return to initial position
- selector switches with 3 fixed positions
- 3-position buttons with return to initial position
- 3-position buttons with 2 fixed positions + 1 return to initial position
- rotary selector switches with 4 to 12 positions
- potentiometer (for 2-joystick model)

The screen on the transmitter allows configuring easily and choosing items such as:



- > Screen language
- > Receiver which you want to use
- > Radio transmit frequency and power
- > Duration of the « standby » time delay (automatically stops transmitter and associated receiver if not used for a defined period of time)
- > Operating modes of the equipment (32 max.)

It also allows to view:

- Battery charge level
- Radio communication
- Equipment labels and controlled functions (max 96 different labels for selectors)
- Equipment feedback (16 feedbacks max with 10 labels / feedback - 48 labels max in total)
- Alarms (8 for application use + 8 for system)

### Compatibility:

These transmitters work with **Elio, Alto, Timo** and **Nemo** receivers to be defined according the application.

## TECHNICAL CHARACTERISTICS

### MECHANICAL CHARACTERISTICS AND ENVIRONMENTAL WITHSTAND CAPACITY

Housing material	shock-proof polyamide
Water tightness	IP65
Weight (with battery)	from 1700 g to 1800 g depending on configurations
Dimensions	297 x 215 x 170 mm
Carried	by carrying belt by 2-point shoulder strap

### ENVIRONMENTAL WITHSTAND CAPACITY

Operating temperature	-20°C to + 50°C
Storage temperature without battery	-20°C to + 70°C
Battery storage temperature	-20°C to + 50°C

### ELECTRICAL AND RADIO CHARACTERISTICS

Power supply	Li-ion battery
Autonomy (25°C) with radio activated	10 hours
100% time	
Frequency selection	64 frequencies for 433-434 MHz band
Manual / automatic	12 frequencies for 869 MHz band 64 frequencies for 911-918 MHz band
Emission power	<10 mW (license free)
Range limitation	10 selectable levels of power
Modulation	FM
Average range <sup>(1)</sup>	100 m in industrial space <sup>(1)</sup> 300 m in open space <sup>(1)</sup>
Charging time (autonomy > 80%)	3 hr (20 mn of charge get 1hr autonomy)
Charging temperature range	0°C to + 40°C

### FUNCTIONAL CHARACTERISTICS

Display	Backlit LCD display, 128 x 128 pixels 42 mm (W) x 40 mm (H)
USB interface for configuration and diagnosis	mini-B 5-point USB connector Easy access in a compartment on the back side of the transmitter
Operating indications	On screen (radio link status, battery status, status of buttons, information feedbacks...)
Function buttons	4 pushbuttons (mounted around the screen) + up to 12 positions for switches depending on number of joysticks
Navigation and startup buttons	2 pushbuttons to configure the product 1 On / Validation button (for startup and validation of menus on screen)
Emergency stop	2 positions with rotary unlock system
Standby function	User-defined time delay (from 1 s to infinity)

<sup>(1)</sup> Range varies according to environment conditions around transmitter and reception antenna (steel works, metal walls, etc.).

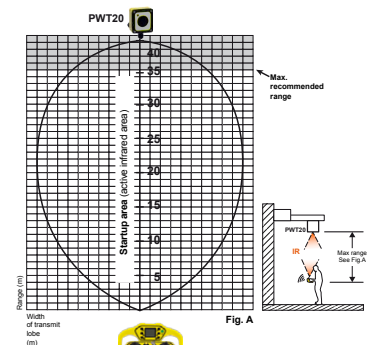
## ADDITIONAL OPTIONS

### STARTUP VALIDATION BY IR

Startup of the remote-controlled equipment can be secured by adding an IR startup feature.

- To start the equipment, the operator must point the module in the direction of the PWT20 IR module(s) mounted on the equipment to control. The "Transmitter / Equipment controlled" match-up takes place with no possibility of error.

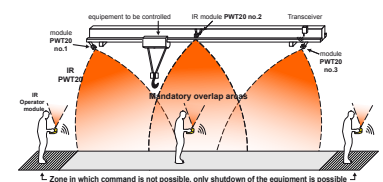
- The IR startup feature has a range of 35 m (see fig. A).



### LIMITATION OF WORK AREA BY INFRARED

The transmitter features an IR emission function which detects an operator in the IR working area. Operator safety is ensured since the operator is required to work in the IR area.

The maximum guaranteed work distance between the PWT20 IR modules and the operator module is 35 meters.



### C16 INDUSTRIAL CONNECTOR FOR 2 DRY CONTACTS

- 4 connection terminals
- switching capacity < 10 mA
- female socket
- supplied with cap

### C16 INDUSTRIAL CONNECTOR FOR WIRE CONNECTION

- 7 connection terminals
- male socket
- supplied with cap

## ACCESSORIES



### Battery charger

Reference: PWC  
 Dimensions: 170 x 65 x 36 mm  
 Power supply: 12/24 VDC  
 Power: 7 W

### Plug-in battery for transmitter

Reference: PWB  
 Dimensions: 57 x 56 x 16 mm  
 Voltage: 3,7 V  
 Capacity: 1900 mA  
 Technology: lithium ion



### Mains adapter for battery charger

Reference: UBCU  
 Dimensions: 41 x 72 x 39 mm  
 Power supply: 115-230 VAC  
 Output: 12 VDC  
 Power: 7 W



### Cigarette lighter plug adapter for battery charger

Reference: PWA4  
 Dimensions: 90 x 20 x 20 mm  
 Power supply: 12-24VDC  
 Output: Power supply



### Removable shoulder strap

Reference: UWE102



### Carrying belt

Reference: PWM103



### Key switch No. 2D138 diameter 22 for cabinet

Reference: PWE01



### Cable for wire connection between transmitter and receiver

Reference: PWL010  
 Length: 10 meters  
 Equipped with a C16 female connector on one side and a C16 male connector on the other side

### C16 male 4 points industrial connector Kit to be screwed

Reference: PWM202

COMPACT DESIGN

BUS COMMUNICATION

# Nemo

## RECEIVER

The Nemo radio receiver provides solutions to the broad range of functional needs of secure applications, through a wide variety of industrial network communication buses. This highly flexible product integrates today's cutting edge technology for optimum performance.

### MAIN FEATURES

- > Configurable, smart bi-directional radio link exchanges information while adapting to the radio environment.
- > Internal, unique SIM card contains all the receiver and transmitter parameters linked to the application, and:
  - allows a transmitter to associate to a receiver by recovering the application configuration,
  - allows quick replacement of a receiver if necessary.
- > Quick and easy setup of the product by mini-B USB connector and **iDialog** software setup (labels, feedback, alarms, mapping actuators/outputs, interlocks, network features, access by PIN codes).
- > Cable glands, circular connectors M12 on receiver for easy installation.
- > Spring-type terminal strips to withstand vibrations.
- > Communication with the equipment on **RS485 Modbus RTU Network, CANopen, DeviceNet, PROFIBUS, PROFINET, EtherCAT, Modbus TCP/IP, EtherNet/IP, or realtime deterministic Ethernet POWERLINK industrial network.**

### FULLY COMPLIANT WITH EUROPEAN DIRECTIVES:

Machinery directive 2006/42/EC:

Emergency stop

> SIL 3 per EN 61508

> Performance level PL e per EN ISO

13849-1 and -2

EC type certificate issued by TÜV NORD



Radio equipment

(low voltage, electromagnetic compatibility, radio spectrum)

2014/53/EU

TRANSCIVER  
**Nemo**



BIDIRECTIONAL  
 RADIO LINK

USB CONNECTOR FOR  
 MAINTENANCE AND  
 CONFIGURATION

INTERNAL  
 ANTENNA

PLUG-IN SIM CARD  
 WITH APPLICATION  
 CONFIGURATION

BREATHABLE  
 MEMBRANE  
 PREVENTS  
 CONDENSATION

IDENTIFICATION OF  
 TERMINAL STRIPS  
 WITH SPRING-TYPE  
 CONNECTIONS

OPTION  
 NETWORK  
 COMMUNICATION  
 BUS CARD



MOUNTING KIT FOR  
 INSTALLATION ON MAGNETIC  
 FIXTURES/ VIBRATION MOUNT  
 (ACCESSORY)

1 CABLE GLAND M25

OPTION  
 1 M12 MALE 5 POINTS  
 CIRCULAR CONNECTOR  
 OR  
 M12 FEMALE 5 POINTS  
 OR  
 M12 FEMALE 4 POINTS OR  
 M12 FEMALE 8 POINTS  
 ACCORDING TO NETWORK  
 COMMUNICATION  
 BUS

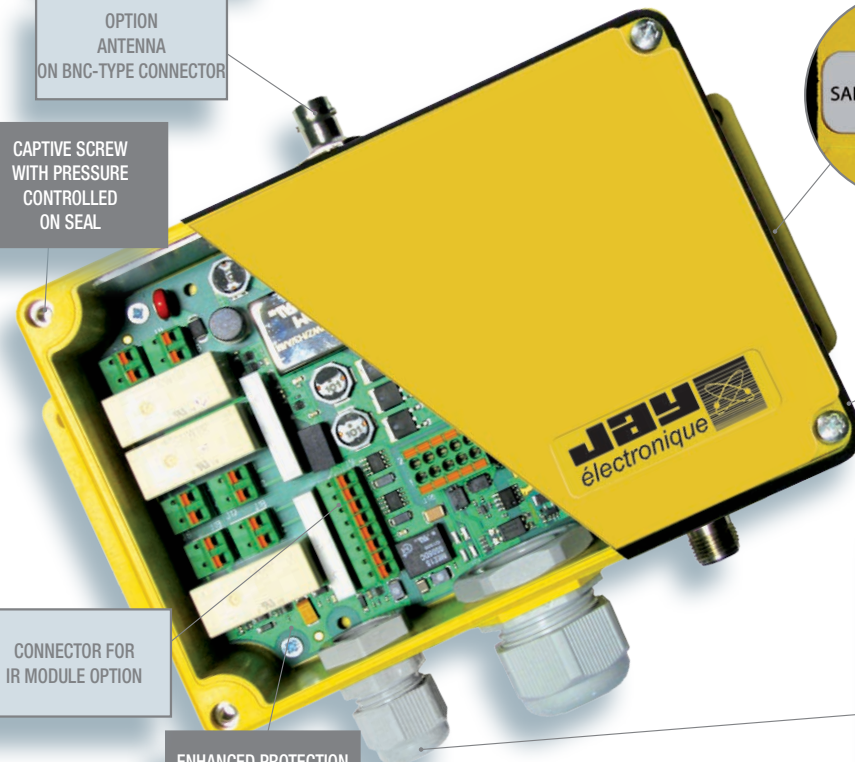
OPTION  
 ANTENNA  
 ON BNC-TYPE CONNECTOR



INDICATOR LIGHTS VISIBLE FROM  
 THE OUTSIDE  
 (POWER SUPPLY /  
 SAFETY RELAY STATE/RADIO QUALITY)

CAPTIVE SCREW  
 WITH PRESSURE  
 CONTROLLED  
 ON SEAL

SEALS



CONNECTOR FOR  
 IR MODULE OPTION

ENHANCED PROTECTION  
 OF ELECTRONIC  
 CIRCUITS

OPTION  
 1 ADDITIONAL M16 CABLE  
 GLAND  
 OR  
 1 M12 MALE 5 POINTS  
 CIRCULAR CONNECTOR  
 OR M12 FEMALE 5 POINTS  
 OR M12 FEMALE 4 POINTS  
 (ACCORDING TO AVAILABLE  
 SPACE)

DESCRIPTION

The Nemo receiver is formed by a motherboard comprising:

- > 2 safety relays (RS1& RS2) (active when the «On /Validation» button on the transmitter is pressed; self-holding up to shutdown)
- > **2 function relays secured by wiring and safety relay RSF3 PL d according to EN13849-1 and -2, SIL 3 according to EN61508**
- > 1 logic input
- > **1 RS485 Modbus RTU interface**
- > **1 CANopen interface**
- > 1 terminal strip to connect up to two infrared modules (optional) with possibility of differentiating the activation of a module over the other.

Wireless HMI Control (WHC)

Text messages or graphic images can be sent from CANopen or Modbus Network or communication bus (option) and write on transmitter display screen.

Compatibility:

These receivers operate with **Beta**, **Gama**, **Pika**, **Moka** transmitter, to be defined according the application.

TECHNICAL CHARACTERISTICS

MECHANICAL CHARACTERISTICS AND ENVIRONMENTAL WITHSTAND CAPACITY

Housing material	Fiberglass polyamide
Tightness	IP 65
Weight	600 g
Dimensions	190 x 120 x 60 mm max (not including antenna)
Operating temperature range	- 20°C to + 60°C
Storage temperature range	- 30°C to + 70°C
Cable lead-out	- via 1 or 2 cable glands - via 1 or 2 M12 circular connectors
Cable connections	Spring-type terminal strips

RADIO CHARACTERISTICS

Frequency choice	- 64 programmable frequencies on 433-434 MHz band - 12 programmable frequencies on 869 MHz band - 64 programmable frequencies on 911-918 MHz band
Transmit power	< 10 mW (license free)
Modulation	FM
Antenna	Internal antenna (option: plug-in antenna on BNC connector)
Average range <sup>(1)</sup>	External antenna : 250 m in congested environment <sup>(1)</sup> 300 m in clear environment <sup>(1)</sup> Internal antenna : 50 m in clear environment <sup>(1)</sup>

ELECTRICAL CHARACTERISTICS

Power supply voltage	9 to 30 VDC
Maximum consumption	18 W
Power supply protection	- against polarity inversions - against overcurrents by fuse
Response time	On startup : 0,5 s max On command : 300 ms max
Active stop time	100 ms
Passive stop time adjustable	between 0,5 to 2 s
Indication	- 1 green indicator light : Radio status and quality (visible with housing closed) - 1 yellow indicator light : Power on (visible with housing closed) - 1 red indicator light : Safety relay status (visible with housing closed) - 2 red indicator lights : malfunction and diagnostic (visible with housing open) - 1 red indicator light : function relay status (visible with housing open) - 2 green indicator lights + 2 red indicator lights : communication bus status (visible with housing open)

<sup>(1)</sup> Range varies according to environment conditions around transmitter and reception antenna (steel works, metal walls ...).

ADDITIONAL OPTIONS

STARTUP BY IR VALIDATION

ACTION AREA LIMITATION BY IR

TRANSMITTER / RECEIVER ASSOCIATION BY IR

SYNCHRONISATION OF EQUIPMENT

- Master / Master
- Tandem
- Pitch and Catch

EMERGENCY BY WIRE CONNECTION (UNDER DEVELOPMENT)

Compatible with Pika and Moka transmitters (in this case, the Modbus RTU communication is unavailable)

SECURE RELAY OUTPUTS

Type of contacts	2 relays with linked contacts
Contacts and connections	2 connection points, potential free, by contact Spring-type terminal strips
Characteristics of contacts	Max. current 6 A

AVAILABLE FUNCTIONS

<b>Relay outputs</b>	
Type of contacts	1 relay with linked contacts 2 relays with NO contacts
Contacts and connections	2 connection points, potential free, by contact Spring-type terminal strips
Outputs	- Max. interrupting capacity: 6 A / output - Max. admissible current for all outputs 12 A - Max. voltage 230 VAC

Logic input

Connection	2 connection points Spring-type terminal strips
High level on input	> 3 VDC
Low level on input	< 2 VDC
Voltage	0-30 VDC max
Active input consumption	< 20 mA

Modbus RTU Slave

Contacts and connections	2 connection points spring-type terminal strips
Protection (D+/D-)	ESD/EMI
Data rate	1200, 2400, 4800, 9600, 19200 (default), 38400, 57600, 115200 bits/s
Parity	- none - even (default) - odd
Slave addressing	1 to 247 (100, default)

Bus CANopen Slave

Contacts and connections	2 connection points spring-type terminal strips
Data rate	20, 50, 100, 125, 250, 500, 800 kbits/s and 1 Mbits/s
Slave addressing	1 to 127

COMMUNICATION BUS OPTIONS

RS485 PROFIBUS/PROFINET

RS485 DEVICENET

ETHERNET POWERLINK

ETHERNET/IP

ETHERCAT

MODBUS TCP/IP

ACCESSORIES: antennas

Description	Reference for use in 418 and 433 MHz frequency bands (A)	Reference for use in 869 and 915 MHz frequency bands (B)	Picture
Straight antenna, 1/4 wave, BNC (1)	VUA001A	VUA001B	approximate length : A = 190mm ; B = 90mm
Straight antenna, 1/2 wave, BNC	VUA002A	VUA002B	approximate length : A = 335mm ; B = 250mm
Through insulated remote antenna, 1/2 wave, with 0,5m BNC cable	VUA100AH	VUA100BH	
Through insulated remote antenna, 1/2 wave, with 2m BNC cable	VUA102AH	VUA102BH	
Through insulated remote antenna, 1/2 wave, with 5m BNC cable	VUA105AH	VUA105BH	
Through insulated remote antenna, 1/2 wave, with 10m BNC cable	VUA110AH	VUA110BH	
Insulated and magnetic remote antenna, 1/2 wave, with 3m BNC cable	VUA103AM	VUA103BM	
Insulated and magnetic remote antenna, 1/2 wave, with 5m BNC cable	VUA105AM	VUA105BM	approximate length : A = 440mm ; B = 320mm
Through uninsulated remote antenna, 1/4 wave, with 3m BNC cable	VUA103AV	VUA103BV	
Through uninsulated remote antenna, 1/4 wave, with 5m BNC cable	VUA105AV	VUA105BV	

(1) : antenna supplied as standard with the receiver (option antenna on BNC-type connector)

OTHER ACCESSORIES



Receiver mounting kit using magnetic fixtures  
Reference : UDWR38



2m cable + 16-pin male connector  
Reference : UDWR14



2m cable + 24-pin male connector  
Reference : UDWR13



Cable gland kit PE M25 with 2 wire grommets  
Reference : PWT01



1 IR module  
Reference : PWT20  
Length : 10 meters  
Cable and plastic M16 cable gland included  
For options : startup by IR validation or limitation of action area by IR system  
Reference : PWT20



10m cable extension + connection for PWT20 IR module  
Reference : WR10



Cable for wire connection between transmitter and receiver (under development)  
Reference : PWL010  
Length : 10 meters  
Equipped with a C16 female connector on one side and a C16 male connector on the other side

COMPACT DESIGN

COMMUNICATING SYSTEM

# Timo

## RECEIVER

Timo radio receiver provides solutions to the broad range of functional needs of secure mobile applications, through a wide variety of input/output interfaces. This highly flexible product integrates today's cutting edge technology for optimum performance.

### MAIN FEATURES

- > Configurable, intelligent bi-directional radio link exchanges information while adapting to the radio environment.
- > Internal, unique SIM card contains all the receiver and transmitter parameters linked to the application, and :
  - allows a transmitter to associate to a receiver by recovering the application configuration,
  - allows you to quickly replace a receiver if necessary.
- > Quick and easy setup of the product by mini-B USB connector and **iDialog** software setup (labels, feedback, alarms, mapping actuators/outputs, interlocks, network features, access by PIN codes).
- > Cable glands, circular connector (M12, C16) or industrial connector (10, 16 contacts) on receiver for easy installation.
- > Spring-type terminal strips ensuring a good vibration withstand capacity.

### FULLY COMPLIANT WITH EUROPEAN DIRECTIVES:

Machinery directive 2006/42/EC:  
Emergency stop  
> SIL-3 per EN 61508  
> Performance level PL e per EN ISO 13849-1 and -2  
EC type certificate issued by TÜV NORD

Certificate E13 vehicle marking:  
Approval granted by SNCH

Radio and telecommunication terminal equipment  
(low voltage, electromagnetic compatibility, radio spectrum)  
R&TTE 99/5/EC



E13 10R - 04 13347

RECEIVER  
**Timo**



BIDIRECTIONAL  
RADIO LINK

INTERNAL  
ANTENNA

USB CONNECTOR FOR  
MAINTENANCE AND CONFI-  
GURATION

IDENTIFICATION OF TERMINAL  
STRIPS WITH SPRING-  
TYPE CONNECTIONS

BREATHABLE  
MEMBRANE  
PREVENTS  
CONDENSATION



PLUG-IN SIM CARD WITH  
APPLICATION CONFIGU-  
RATION

MALE INDUSTRIAL  
CONNECTOR  
10 OR 16 CONTACTS

1 M16 CABLE-GLAND  
OR  
1 M12 5 POINTS CIRCULAR  
CONNECTOR  
OR  
1 C16 7 POINTS MALE  
CONNECTOR  
(ON VERSION WITH 10  
POINTS INDUSTRIAL  
CONNECTOR)



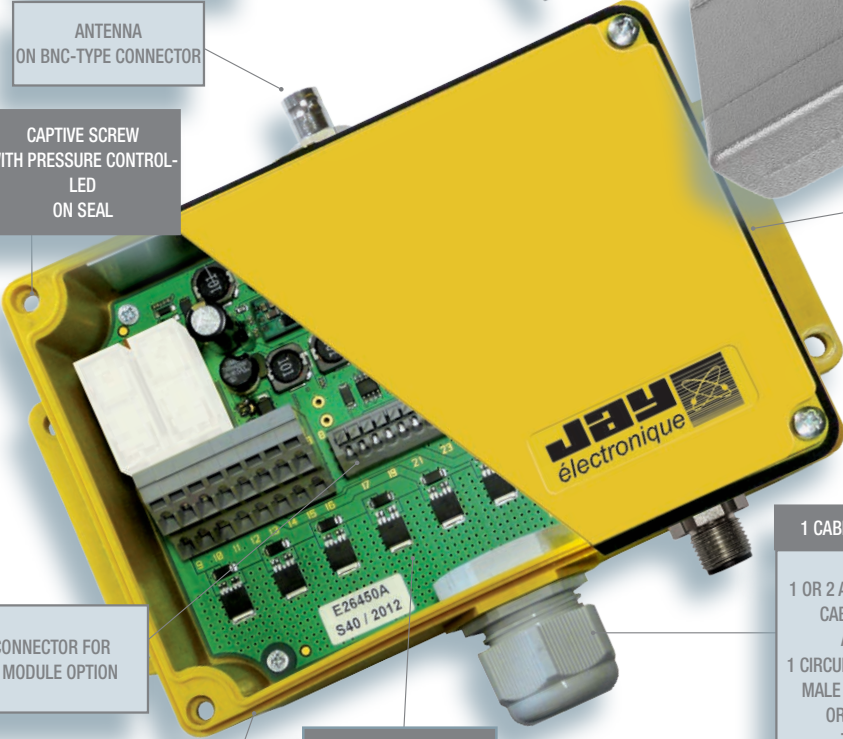
MOUNTING KIT FOR INSTAL-  
LATION ON MAGNETIC FIXTURES/  
VIBRATION MOUNT (ACCES-  
SORY)

FEMALE INDUSTRIAL  
CONNECTOR  
10 OR 16 CONTACTS

ANTENNA  
ON BNC-TYPE CONNECTOR

CAPTIVE SCREW  
WITH PRESSURE CONTROL-  
LED  
ON SEAL

INDICATOR LIGHTS VISIBLE  
FROM  
THE OUTSIDE  
(POWER SUPPLY /  
RADIO QUALITY / SAFETY  
RELAY STATE)



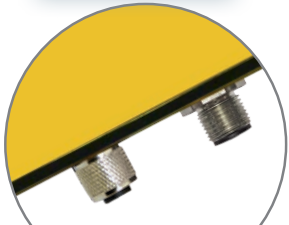
CONNECTOR FOR  
IR MODULE OPTION

SEALS

ENHANCED PROTECTION  
OF ELECTRONIC CIRCUITS

1 CABLE GLAND M25

1 OR 2 ADDITIONAL M16  
CABLE GLANDS  
AND / OR  
1 CIRCULAR CONNECTOR  
MALE M12 5 POINTS  
OR MALE C16  
7 POINTS  
(ACCORDING TO AVAILABLE  
SPACE)



1 M12 5 POINTS CIRCULAR  
CONNECTOR  
+  
1 FEMALE M12 5-PIN  
CIRCULAR CONNECTOR

1 OR 2 M16 CABLE-  
GLANDS



DESCRIPTION

The Timo REceiver is formed by a motherboard comprising:

- > 2 safety relays (RS1& RS2) (active when the «On /Validation» button on the transmitter is pressed; self-holding up to shutdown)
- > 6 transistor outputs with common contact independent with respect to power supply, type logic or PWM
- > 2 analog outputs
- > 2 logic inputs
- > 1 analog input
- > 1 RS485 Modbus interface
- > 1 CANopen interface
- > 1 terminal strip to connect up to two infrared modules (optional) with possibility of differentiating the activation of a module over the other.

Wireless HMI Control (WHC)

Text messages or graphic images can be send from CANopen or Modbus Network and write on transmitter display screen

Compatibility:

These receivers operate with **Beta**, **Gama**, **Pika**, **Moka** transmitters, to be defined according the application.

TECHNICAL CHARACTERISTICS

MECHANICAL CHARACTERISTICS AND ENVIRONMENTAL WITHSTAND CAPACITY

Housing material	Fiberglass polyamide
Tightness	IP 65
Weight	585g
Dimensions	190 x 120 x 60 mm max (not including attachment fittings and antenna)
Operating temperature range	- 20°C to + 60°C
Storage temperature range	- 30°C to + 70°C
Cable lead-out	Several possibilities: - via 1 or several cable gland lead-outs - via a plug-in industrial connector, 10 or 16-contacts - via a M12 or C16 circular connector
Cable connections	Spring-type terminal strips

RADIO CHARACTERISTICS

Frequency choice	- 64 programmable frequencies on 433-434 MHz band - 12 programmable frequencies on 869 MHz band - 64 programmable frequencies on 433-434 MHz band
Transmit power	< 10 mW (license free)
Modulation	FM
Antenna	Internal antenna (option: plug-in antenna on BNC connector)
Average range <sup>(1)</sup>	External antenna : 250 m in congested environment <sup>(1)</sup> 300 m in clear environment <sup>(1)</sup> Internal antenna : 100 m in clear environment <sup>(1)</sup>

ELECTRICAL CHARACTERISTICS

Power supply voltage	9 to 30 VDC
Maximum consumption	4 W
Power supply protection	- against polarity inversions - against overcurrents by fuse
Response time	On startup : 0,5s max On command : 300 ms max
Active stop time	100 ms
Passive stop time adjustable	between 0,5 to 2s
Indication	- 1 green indicator light : Radio status and quality (visible with housing closed) - 1 yellow indicator light : Power on (visible with housing closed) - 1 red indicator light : Safety relay status (visible with housing closed) - 2 red indicator lights : malfunction and diagnostic (visible with housing open) - 1 red indicator light : indicates activation of transistor outputs (visible with housing open)

<sup>(1)</sup> Range varies according to environment conditions around transmitter and reception antenna (steel works, metal walls ...).

ADDITIONAL OPTIONS

STARTUP BY IR VALIDATION

ACTION AREA LIMITATION BY IR

SECURE RELAY OUTPUTS

Type of contacts	2 relays with linked contacts
Contacts and connections	2 connection points, potential free, by contact Spring-type terminal strips
Characteristics of contacts	Max. current 6A

AVAILABLE FUNCTIONS

Transistor outputs

Contacts and connections	1 connection point per output + 1 power supply common contact spring-type terminal strips
Outputs	- Max. interrupting capacity 4A/output - Max. admissible current for all outputs 12A - Max. voltage 30VDC - Max. power 1/4 W - PWM (frequency of 1 to 1000Hz, duty cycle of 1 to 90%, 2 possible frequencies)

Logic inputs

Contacts and connections	2 connection points per input Spring-type terminal strips
High level on input	> 6,5 VDC
Low level on input	< 1,5 VDC
Voltage	0-30Vdc Max
Active input consumption	< 20mA

Analog outputs

Contacts and connections	1 connection point per output + common contact spring-type terminal strips
Type of signal	0-10V
Max. output current	< 10mA

Analog input

Contacts and connections	1 connection point + common contact spring-type terminal strips
Type of signal	0-30V
Active voltage input consumption	< 10mA

Modbus RTU Slave

Contacts and connections	1 RS 485 serial link 2 connection points spring-type terminal strips
Protection (D+/D-)	ESD/EMI
Data rate	1200, 2400, 4800, 9600, 19200 (default), 38400, 57600, 115200 bits/s
Parity	- none - even (default) - odd
Slave addressing	1 to 247 (100, default)

Bus CANopen Slave


Contacts and connections	CIA401 compatible 2 connection points spring-type terminal strips
Data rate	20, 50, 100, 125, 250, 500, 800 kbits/s and 1Mbits/s
Slave addressing	1 to 127

TRANSMITTER / RECEIVER ASSOCIATION BY IR

SYNCHRONISATION OF EQUIPMENT

- Master / Master
- Tandem
- Pitch and Catch

ACCESSORIES: antennas and antenna extensions

Description	Reference for use in 433 MHz frequency band	Reference for use in 869 MHz frequency band	Reference for use in 915 MHz frequency band	Picture
Straight antenna, 1/4 wave, BNC	VUA001A	VUA001B	/	
Through insulated remote antenna, 1/2 wave, with 0,5m BNC cable	VUA100AH	VUA100BH	/	
Through insulated remote antenna, 1/2 wave, with 2m BNC cable	VUA102AH	VUA102BH	/	
Through insulated remote antenna, 1/2 wave, with 5m BNC cable	VUA105AH	VUA105BH	/	
Through insulated remote antenna, 1/2 wave, with 10m BNC cable	VUA110AH	VUA110BH	/	
Insulated and magnetic remote antenna, 1/2 wave, with 3m BNC cable	VUA103AM	VUA103BM	/	
Insulated and magnetic remote antenna, 1/2 wave, with 5m BNC cable	VUA105AM	VUA105BM	/	 <small>(antenna to be mounted on a not grounded metal surface)</small>
Through unshielded remote antenna, 1/4 wave, with 3m BNC cable	VUA103AV	VUA103BV	/	
Through unshielded remote antenna, 1/4 wave, with 5m BNC cable	VUA105AV	VUA105BV	/	
Straight antenna, 1/2 wave, BNC	/	/	VUB984	
0.5 m extension for BNC antenna	/	/	VUB170	
2 m extension for BNC antenna + bracket	/	/	VUB105	
5 m extension for BNC antenna + bracket	/	/	VUB125	
10 m extension for BNC antenna + bracket	/	/	VUB131	

OTHER ACCESSORIES



2m cable + 16-pin male connector  
Reference : UDWR14



2m cable + 24-pin male connector  
Reference : UDWR13



Female industrial connector kit  
10 points, reference : PWT15  
16 points, reference : PWT16



C16 screw-type female circular connector with 7 contacts  
Reference : PWM203



Cable gland kit PE M25 with 2 wire grommets  
Reference : PWT01



1 IR module  
Reference : PWT20  
Length : 10m  
Cable and plastic M16 cable gland included For options : startup by IR validation or limitation of action area by IR system



10m cable extension + connector for PWT20 IR module  
Reference : UDWR10



M12 female circular connector with 5 contacts + 2m cable  
Reference : PWT17



Receiver mounting kit using magnetic fixtures  
Reference : UDWR38

OPTIMISED

OPEN-ENDED



# Elio

## RECEIVER

Elio radio receiver provides solutions to the wide range of functional needs involved in secure industrial applications. This highly flexible product integrates today's cutting edge technology for optimum performance.

### MAIN FEATURES

- > Configurable, intelligent bi-directional radio link exchanges information while adapting to the radio environment.
- > Internal, unique SIM card contains all the receiver and transmitter parameters linked to the application, and :
  - allows a transmitter to associate to a receiver by recovering the application configuration,
  - allows you to quickly replace a receiver if necessary.
- > Quick and easy setup of the product by mini-B USB connector and **iDialog** software setup (labels, feedback, alarms, mapping actuators/outputs, interlocks, network features, access by PIN codes).
- > Cable glands or industrial connector (not supplied) on receiver for easy installation.
- > Spring-type, plug-in terminal strips facilitate wiring and maintenance.

### FULLY COMPLIANT WITH SAFETY AND SECURITY STANDARDS:

Machinery directive 2006/42/EC:

Emergency stop

> SIL 3 per EN 61508

> Performance level PL e

per EN ISO 13849-1 and -2

EC type certificate issued by TÜV

NORD



Radio and telecommunication terminal equipment

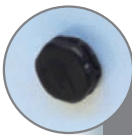
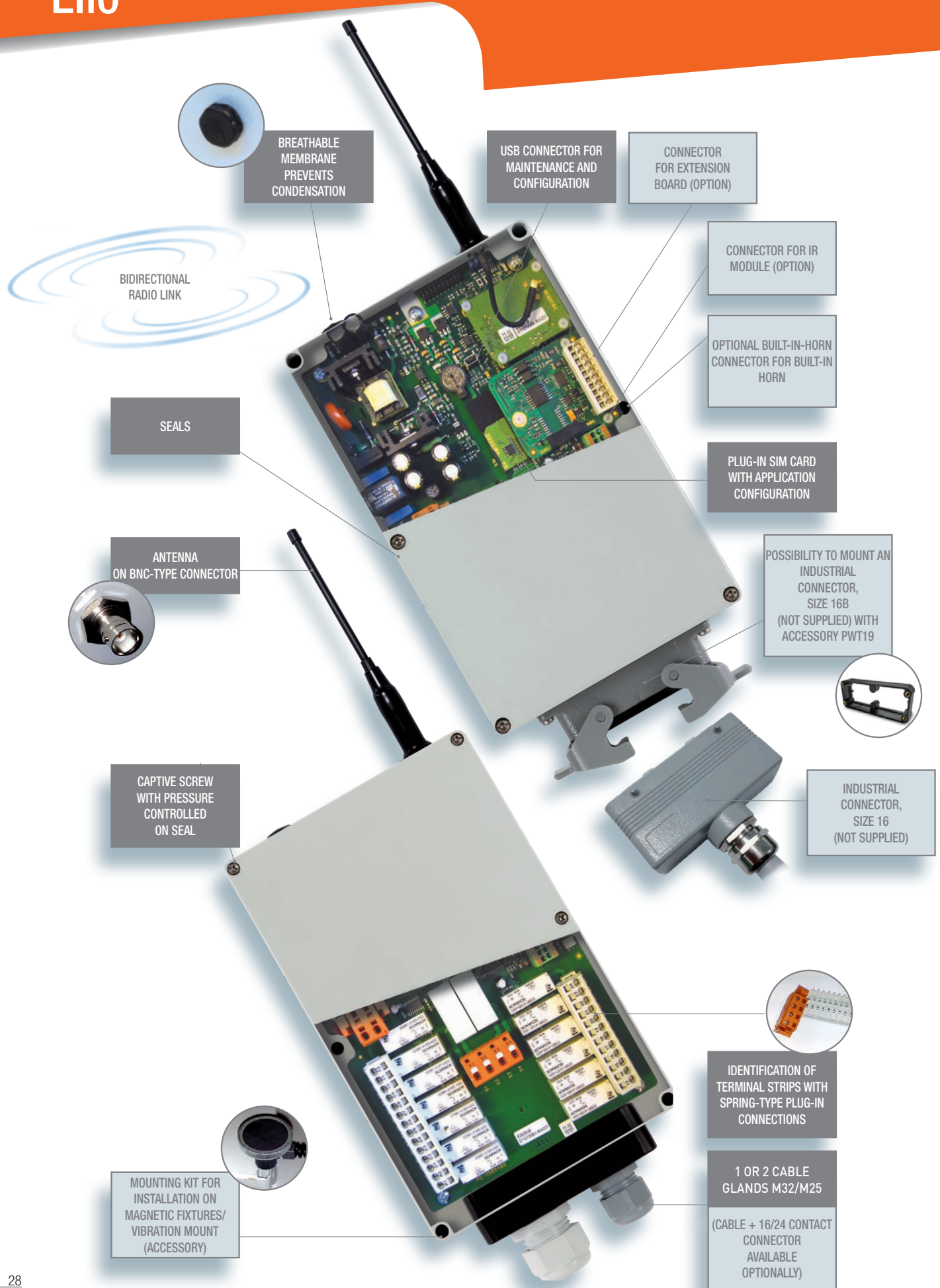
(low voltage, electromagnetic compatibility, radio spectrum)

FCC part 15

ARCEP certificate

Radio Equipment Directive (RED)

# RECEIVER Elio



BREATHABLE MEMBRANE PREVENTS CONDENSATION

USB CONNECTOR FOR MAINTENANCE AND CONFIGURATION

CONNECTOR FOR EXTENSION BOARD (OPTION)

CONNECTOR FOR IR MODULE (OPTION)

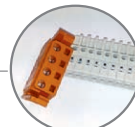
OPTIONAL BUILT-IN-HORN CONNECTOR FOR BUILT-IN HORN

PLUG-IN SIM CARD WITH APPLICATION CONFIGURATION

POSSIBILITY TO MOUNT AN INDUSTRIAL CONNECTOR, SIZE 16B (NOT SUPPLIED) WITH ACCESSORY PWT19



INDUSTRIAL CONNECTOR, SIZE 16 (NOT SUPPLIED)



IDENTIFICATION OF TERMINAL STRIPS WITH SPRING-TYPE PLUG-IN CONNECTIONS

1 OR 2 CABLE GLANDS M32/M25

(CABLE + 16/24 CONTACT CONNECTOR AVAILABLE OPTIONALLY)



BIDIRECTIONAL RADIO LINK

SEALS



ANTENNA ON BNC-TYPE CONNECTOR

CAPTIVE SCREW WITH PRESSURE CONTROLLED ON SEAL



MOUNTING KIT FOR INSTALLATION ON MAGNETIC FIXTURES/ VIBRATION MOUNT (ACCESSORY)

## DESCRIPTION

The Elio receiver is formed by a motherboard comprising:

- > 1 «On» relay (RM) (active when the «On/Validation» button on the transmitter is pressed; not self-holding)
- > 2 safety relays (RS1& RS2) (active when the «On/Validation» button on the transmitter is pressed; self-holding up to shutdown).
- > 12 function relays (R1 to R12)
- > 1 connector for connection up to 3 IR cells (optional). It is possible to increase this number to 9 with UDWR40 wiring interfaces (accessory).
- > 1 auxiliary connector for an extension board (optional)
- > 1 connector for connection of the internal horn

### Wireless HMI Control (WHC)

Text messages or graphic images can be sent from CANopen or Modbus Network and write on transmitter display screen

### Compatibility:

These receivers operate with **Beta**, **Gama**, **Pika**, **Moka** transmitters, to be defined according the application.

## TECHNICAL CHARACTERISTICS

### MECHANICAL CHARACTERISTICS AND ENVIRONMENTAL WITHSTAND CAPACITY

Housing material	ABS,
Tightness	IP 65
Weight	2Kg (approx.)
Dimensions	160 x 250 x 120 mm max. (not including antenna)
Operating temperature range	- 20°C to + 60°C
Storage temperature range	- 30°C to 70°C
Cable lead-out	- by 2 cable gland lead-outs - by industrial connector (not supplied, requires mounting accessory PWT19)
Cable connections	Spring-type plug-in connectors

### RADIO CHARACTERISTICS

Frequency choice	- 11 programmable frequencies on 418-419 MHz band - 64 programmable frequencies on 433-434 MHz band - 12 programmable frequencies on 869 MHz band - 64 programmable frequencies on 911-918 MHz band
Transmit power	< 10 mW (license free)
Modulation	FM
Antenna	plug-in antenna on BNC connector ref: VJA001A (bands 418-419 MHz or 433-434 MHz) ref: VJA001B (bands 869 MHz or 911-918 MHz) Other antennas available as accessories
Average range <sup>(1)</sup>	100 m in industrial environment <sup>(1)</sup> 300 m in open space <sup>(1)</sup>

### ELECTRICAL CHARACTERISTICS

Power supply voltage	- 12 VDC - 12 % to 24 VDC +25 % - 12 VDC - 5 % to 24 VDC +25 % and 24/48 VAC ± 25 % - 115/230 VAC ± 15 %
Maximum consumption	8 W

### SECURE RELAY OUTPUTS

Type of contacts	2 relays with linked contacts
Contacts and connections	2 connection points, potential free, by contact Spring-type plug-in connectors
Characteristics of contacts	Max. current 6A

### SECURE RELAY OUTPUTS

Contacts and connections	2 relays with linked contacts Spring-type plug-in connectors
Command	1 «On» relay + 12 function relays
Outputs	Independent NO relays - Category DC13 0.5A / 24VDC , AC15 2A / 230VAC - Interrupting capacity 2000VA max. - Max. current 8A - Min. current 10 mA (12 Vmin.) - Max. voltage. 250VAC
Response time	- On startup : 0,5s max - On command : 300ms max
Active stop time	100 mst
Passive stop time	adjustable between 0.5 and 2s
Indication	- 1 green indicator light : Radio status and quality - 1 yellow indicator light : Power on - 1 red indicator light : fault and diagnostic
Power supply protection	- Against polarity inversions - Against overcurrents by fuse

<sup>(1)</sup> Range varies according to environment conditions around transmitter and reception antenna (steel works, metal walls ...).

## ADDITIONAL OPTIONS

### EXTENSION BOARD TO COMMUNICATE WITH EQUIPMENT USING OTHER COMPLEMENTARY ELECTRICAL SIGNALS

Galvanic insulation	> 2,5KV
<b>2 logic inputs:</b>	
Contacts and connections	4 connection points with spring-type plug-in connectors
Active input consumption	< 20mA
High level on input	> 3Vdc
Low level on input	< 2Vdc
Voltage	0-30Vdc Max
<b>1 analogue input:</b>	
Contacts and connections	2 connection points with spring-type plug-in connectors
Type of signal	0-10V or 4-20mA
Active voltage input consumption	< 10mA
<b>1 analogue output:</b>	
Contacts and connections	2 connection points with spring-type plug-in connectors
Type of signal	0-10V or 4-20mA
Voltage output max. current	< 10mA
<b>1 RS 485 serial link:</b>	
Contacts and connections	2 connection points with spring-type plug-in connectors
Protocol	Modbus RTU slave
Data rate	1200, 2400, 4800, 9600, 19200 (default), 38400, 57600, 115200 bit/s
Parity	none / even (default) / odd
Slave addressing	1 to 247

### STARTUP BY IR VALIDATION

### ACTION AREA LIMITATION

### BUILT-IN HORN

Power	100 dB
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### SYNCHRONIZATION OF EQUIPMENT

- Master / Master
- Tandem
- Pitch and Catch

### TRANSMITTER / RECEIVER SELECTION AND ASSOCIATION BY INFRARED

ACCESSORIES: antennas

Description	Reference for use in 418 and 433 MHz frequency bands (A)	Reference for use in 869 and 915 MHz frequency bands (B)	Picture
Straight antenna, 1/4 wave, BNC (1)	VUA001A	VUA001B	approximate length : A = 190mm ; B = 90mm
Straight antenna, 1/2 wave, BNC	VUA002A	VUA002B	approximate length : A = 335mm ; B = 250mm
Through insulated remote antenna, 1/2 wave, with 0,5m BNC cable	VUA100AH	VUA100BH	
Through insulated remote antenna, 1/2 wave, with 2m BNC cable	VUA102AH	VUA102BH	
Through insulated remote antenna, 1/2 wave, with 5m BNC cable	VUA105AH	VUA105BH	
Through insulated remote antenna, 1/2 wave, with 10m BNC cable	VUA110AH	VUA110BH	
Insulated and magnetic remote antenna, 1/2 wave, with 3m BNC cable	VUA103AM	VUA103BM	approximate length : A = 320mm ; B = 190mm Required drill hole Ø15mm
Insulated and magnetic remote antenna, 1/2 wave, with 5m BNC cable	VUA105AM	VUA105BM	
Through uninsulated remote antenna, 1/4 wave, with 3m BNC cable	VUA103AV	VUA103BV	(antenna to be mounted on a not grounded metal surface approximate length : A = 180mm ; B = 100mm Required drill hole Ø12 mm or Ø19 mm (according mounting type)
Through uninsulated remote antenna, 1/4 wave, with 5m BNC cable	VUA105AV	VUA105BV	

(1) : antenna supplied as standard with the receiver

OTHER ACCESSORIES



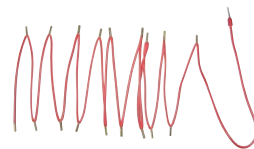
Cable gland kit PE M25 with 2 wire grommets  
Reference: PWT01



2m cable + 16-pin male connector  
Reference: UDWR14



2m cable + 24-pin male connector  
Reference: UDWR13



Wiring accessories for common points  
Reference: PWT02



Mounting accessory for industrial connector  
Reference: PWT19



1 IR module  
(10m cable and plastic M16 cable gland included)  
for options : startup by IR validation or limitation of action area by IR system  
Reference: PWT20



10m cable extension + connector for PWT20 IR module  
Reference : UDWR10



Wiring interface to connect 3 infrared IR modules PWT20 on a receiver IR input  
(delivered with 10 m cable to be connected to the receiver IR input and mounting kit using 2 magnetic fastening pads)  
Reference: UDWR40



Receiver mounting kit using magnetic fixtures  
Reference: UDWR38

MODULAR

MULTIFUNCTION



# Alto

## RECEIVER

Alto radio receiver provides solutions to the wide range of functional needs involved in secure industrial applications. This highly flexible product integrates today's cutting edge technology for optimum performance.

### MAIN FEATURES

- > Modular unit with a large choice of functions
- > Configurable, intelligent bi-directional radio link exchanges information while adapting to the radio environment.
- > Internal, unique SIM card contains all the receiver and transmitter parameters linked to the application, and :
  - allows an operator module to associate to a receiver by recovering the application configuration,
  - allows you to quickly replace a receiver if necessary.
- > Quick and easy setup of the product by mini-B USB connector and **iDialog** software setup (labels, feedback, alarms, mapping actuators/outputs, interlocks, network features, access by PIN codes).
- > Cable glands or industrial connector (not supplied) on receiver for easy installation.
- > Spring-type, plug-in terminal strips facilitate wiring and maintenance.

### FULLY COMPLIANT WITH SAFETY AND SECURITY STANDARDS:

Machinery directive 2006/42/EC:

Emergency stop

> SIL 3 per EN 61508

> Performance level PL e

per EN ISO 13849-1 and -2

EC type certificate issued by TÜV

NORD



Radio and telecommunication terminal equipment

(low voltage, electromagnetic

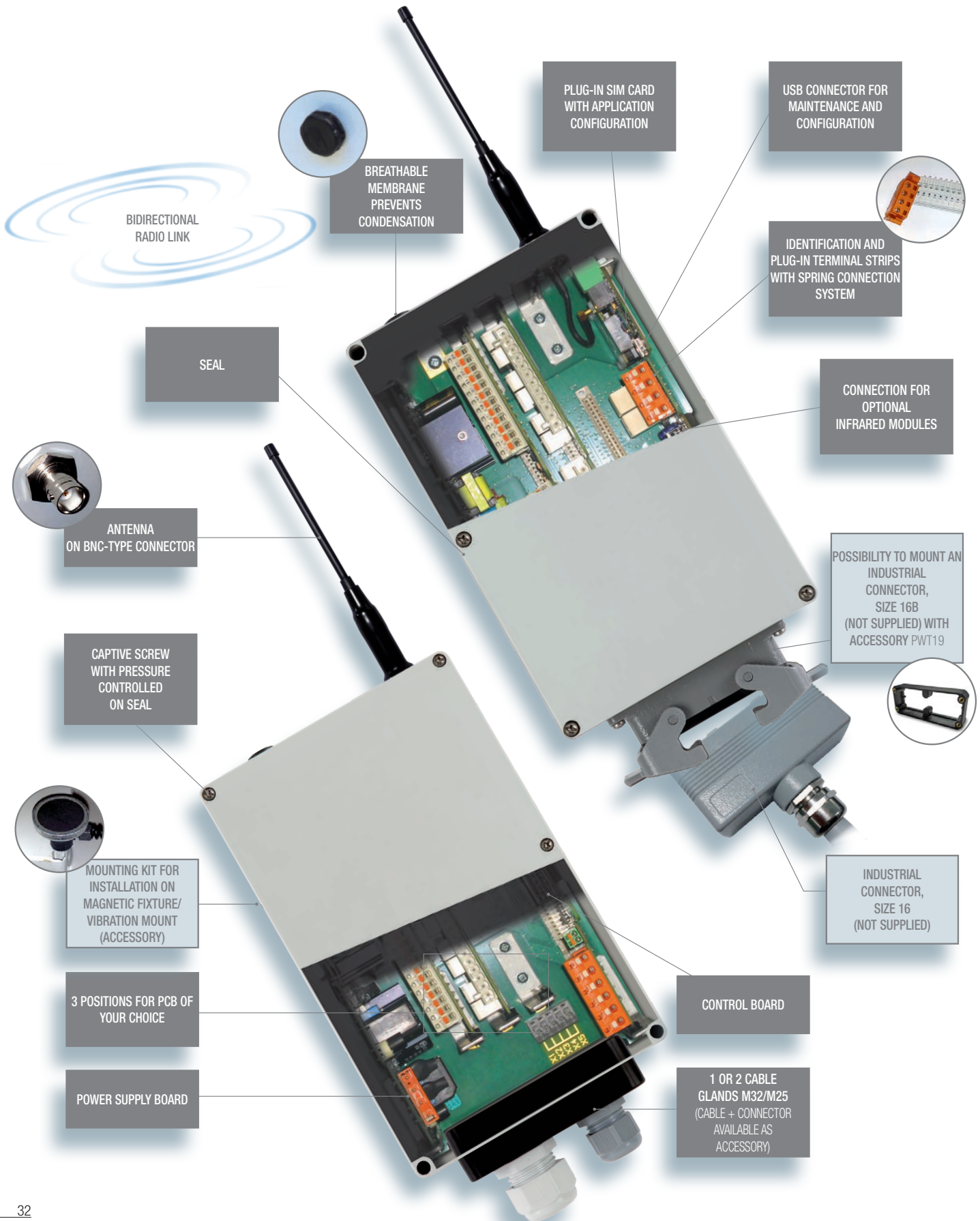
compatibility, radio spectrum)

FCC part 15

ARCEP certificate

Radio Equipment Directive (RED)

# RECEIVER Alto



BIDIRECTIONAL  
RADIO LINK

BREATHABLE  
MEMBRANE  
PREVENTS  
CONDENSATION

PLUG-IN SIM CARD  
WITH APPLICATION  
CONFIGURATION

USB CONNECTOR FOR  
MAINTENANCE AND  
CONFIGURATION

IDENTIFICATION AND  
PLUG-IN TERMINAL STRIPS  
WITH SPRING CONNECTION  
SYSTEM

CONNECTION FOR  
OPTIONAL  
INFRARED MODULES

SEAL

ANTENNA  
ON BNC-TYPE CONNECTOR

POSSIBILITY TO MOUNT AN  
INDUSTRIAL  
CONNECTOR,  
SIZE 16B  
(NOT SUPPLIED) WITH  
ACCESSORY PWT19

CAPTIVE SCREW  
WITH PRESSURE  
CONTROLLED  
ON SEAL

MOUNTING KIT FOR  
INSTALLATION ON  
MAGNETIC FIXTURE/  
VIBRATION MOUNT  
(ACCESSORY)

3 POSITIONS FOR PCB OF  
YOUR CHOICE

POWER SUPPLY BOARD

CONTROL BOARD

1 OR 2 CABLE  
GLANDS M32/M25  
(CABLE + CONNECTOR  
AVAILABLE AS  
ACCESSORY)

INDUSTRIAL  
CONNECTOR,  
SIZE 16  
(NOT SUPPLIED)



## DESCRIPTION

The modular receiver is formed by PCBs which connect into the unit's motherboard.

The unit is systematically equipped with :

- > 1 power supply board
- > 1 control board containing safety relays RS1 & RS2 / On-Horn relay / 3 inputs for infrared module. It is possible to increase this number to 9 with UDWR40 wiring interfaces (accessory) / 1 logic input / 1 analog input / 1 RS485 Modbus serial link

3 positions are provided to receive, in accordance with your application :

- > 1 board with 12 On/Off relays
- > 1 board with 12 logic inputs + 2 analog inputs
- > 1 board with 6 analog outputs + 1 bypass output
- > 1 BUS board

### Wireless HMI Control (WHC)

Text messages or graphic images can be send from CANopen or Modbus Network and write on transmitter display screen

### Compatibility:

These receivers operate with **Beta**, **Gama**, **Pika**, **Moka** transmitters, to be defined according the application.

## TECHNICAL CHARACTERISTICS

### MECHANICAL CHARACTERISTICS AND ENVIRONMENTAL WITHSTAND CAPACITY

Housing material	ABS
Tightness	IP 65
Weight	2Kg (approx.)
Dimensions	160 x 250 x 120 mm max (not including antenna)
Operating temperature range	- 20°C to + 60°C
Storage temperature range	- 30°C to 70°C
Cable lead-out	- by 2 cable glands (size M32/M25) - by industrial connector (not supplied, requires mounting accessory PWT19)
Wiring connection	Spring-type plug-in connectors

### RADIO CHARACTERISTICS

Frequency choice	- 11 programmable frequencies on 418-419 MHz band - 64 programmable frequencies on 433-434 MHz band - 12 programmable frequencies on 869 MHz band - 64 programmable frequencies on 911-918 MHz band
Transmit power	< 10 mW (license free)
Modulation	FM
Antenna	plug-in antenna on BNC connector ref: VUA001A (bands 418-419 MHz or 433-434 MHz) ref: VUA001B (bands 869 MHz or 911-918 MHz) Other antennas available as accessories
Average range <sup>(1)</sup>	100 m in industrial environment <sup>(1)</sup> 300 m in open space <sup>(1)</sup>

### ELECTRICAL CHARACTERISTICS OF POWER SUPPLY BOARD

Power supply voltage	12-24VDC ± 15 % / 24-48VAC ± 25 % / 115-230VAC ± 15 %
Maximum consumption	15 W
USB Interface	mini-B 5-contact USB connector
Indication	- yellow indicator lights : power on
Number of relays	30
controllable according to power supply without or with 1 IR module connected	

### ELECTRICAL CHARACTERISTICS OF CONTROL BOARD

Contact type	2 relays with linked contacts
Contacts and connection	3 connection points, 1 Contact Spring-type plug-in connectors
Indication	- 1 green indicator light : Radio status and quality - 1 yellow indicator light : Power on - 1 red indicator light : fault and diagnostic
Active stop time	100 ms
Passive stop time	adjustable 0,5 to 2 s

### ON CONTROL BOARD

#### 1 Logic input

Contacts and connection	2 connection points, 1 Contact Spring-type plug-in connectors
1 active input consumption	< 10mA
Voltage	0 to 30VDC
Lowlevel on input	< 2VDC
Highlevel on input	> 3VDC

#### 1 Analog input

Contacts and connection	2 connection points, 1 Contact Spring-type plug-in connectors
Max. input level	10V or 4-20mA
1 active input consumption	< 12mA

#### 1 RS485 serial link

Contacts and connection	2 connection points, 1 Contact Spring-type plug-in connectors
Protocol	Modbus RTU slave
Data rate	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bit/s
Parity	none / even / odd
Slave addressing	1 to 247

<sup>(1)</sup> Range varies according to environment conditions around transmitter and reception antenna (steel works, metal walls ...).

## ADDITIONAL OPTIONS

### ELECTRICAL CHARACTERISTICS OF BOARD WITH 12 CONTROL RELAY OUTPUTS

Contacts and connection	2 connection points, 1 Contact Spring-type plug-in connectors
Outputs	Independent relays - Category DC13 0,5A / 24VDC , AC15 2A / 230VAC - Interrupting capacity, 2000VA max. - Max. current 8A (control relay), 6A (safety relay) - Min. current 10 mA (12 Vmin.) - Max. voltage 250VAC
Response time	- On startup : 0,5s max - On command : 200ms typical

### ELECTRICAL CHARACTERISTICS OF BOARD WITH 12 LOGIC INPUTS + 2 ANALOG INPUTS

<b>Logic inputs</b>	
Contacts and connection	2 connection points, 1 Contact Spring-type plug-in connectors
Consumption of an active input	< 10mA
Voltage	0 to 30VDC
Low level on input	< 2Vdc
High level on input	> 3Vdc
<b>Analog inputs</b>	
Contacts and connection	2 connection points, 1 Contact Spring-type plug-in connectors
Max. input level	10V or 4-20mA
Consumption of an active input	< 12mA

### ELECTRICAL CHARACTERISTICS OF BOARD WITH 6 ANALOG OUTPUTS + 1 BYPASS OUTPUT

<b>Analog outputs</b>	
Contacts and connection	2 connection points, 1 Contact Spring-type plug-in connectors
Output level	0 / 10V -10V / 0 / +10V 3V / 6V / 9V 6V / 12V / 18V
Voltage output max. current	10mA

### ELECTRICAL CHARACTERISTICS OF BOARD WITH BUS

CANopen slave CIA 401 compatible	
Contacts and connection	2 connection points on spring terminals
Data rate	20, 50, 100, 125, 250, 500, 800 kbits/s and 1 Mbits/s
Slave addressing	1 to 127

### EMERGENCY BY WIRE CONNECTION

### SYNCHRONIZATION OF EQUIPMENT

- Master / Master
- Master / Slave
- Tandem
- Pitch and Catch

### STARTUP BY IR VALIDATION

### ACTION AREA LIMITATION BY INFRARED

### TRANSMITTER / RECEIVER SELECTION AND ASSOCIATION BY INFRARED

ACCESSORIES: antennas

Description	Reference for use in 418 and 433 MHz frequency bands (A)	Reference for use in 869 and 915 MHz frequency bands (B)	Picture
Straight antenna, 1/4 wave, BNC (1)	VUA001A	VUA001B	approximate length : A = 190mm ; B = 90mm
Straight antenna, 1/2 wave, BNC	VUA002A	VUA002B	approximate length : A = 335mm ; B = 250mm
Through insulated remote antenna, 1/2 wave, with 0,5m BNC cable	VUA100AH	VUA100BH	
Through insulated remote antenna, 1/2 wave, with 2m BNC cable	VUA102AH	VUA102BH	
Through insulated remote antenna, 1/2 wave, with 5m BNC cable	VUA105AH	VUA105BH	
Through insulated remote antenna, 1/2 wave, with 10m BNC cable	VUA110AH	VUA110BH	
Insulated and magnetic remote antenna, 1/2 wave, with 3m BNC cable	VUA103AM	VUA103BM	
Insulated and magnetic remote antenna, 1/2 wave, with 5m BNC cable	VUA105AM	VUA105BM	approximate length : A = 440mm ; B = 320mm
Through uninsulated remote antenna, 1/4 wave, with 3m BNC cable	VUA103AV	VUA103BV	
Through uninsulated remote antenna, 1/4 wave, with 5m BNC cable	VUA105AV	VUA105BV	

(1) : antenna supplied as standard with the receiver

OTHER ACCESSORIES



**Cable gland kit PE M25 with 2 wire grommets**

Reference: PWT01



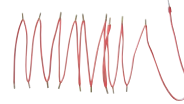
**2m cable + 16-pin male connector**

Reference : UDWR14



**2m cable + 24-pin male connector**

Reference : UDWR13



**Wiring accessories for common points**

Reference: PWT03



**Mounting accessory for industrial connector**

Reference : PWT19



**Receiver mounting kit using magnetic fixtures**

Reference: UDWR38



**1 IR module**  
(10m cable and plastic M16 cable gland included) for options : startup by IR validation or limitation of action area by IR system  
Reference: PWT20



**10m cable extension + connector for PWT20 IR module**  
Reference : UDWR10



**Wiring interface to connect 3 infrared IR modules PWT20 on a receiver IR input**  
(delivered with 10 m cable to be connected to the receiver IR input and mounting kit using 2 magnetic fastening pads)  
Reference : UDWR40



**Cable for wire connection between operator module and receiver**

Reference : PWL010  
Length : 10 meters

# 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 PROFSafe 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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