Industrial enhanced-safety UD Series radio remote controls

Typical applications:

Industrial lifting

- Travelling cranes, gantry cranes
- Monorails, Hoists, jib cranes

Industrial equipment

- Handling systems
 - Dynamic storage
 - Ovens
- Transfer cranes
- Industrial vehicles
 - Bulk product transport
 - Animal feed transport
 - Sanitation
 - Aircraft pushers

Construction

- Tower cranes
- Concrete pumps

Description

A radio remote control provides numerous advantages:

- Large freedom of movement
- Easy to use
- Precise, quality manoeuvres
- Visibility
- Productivity
- With the UD radio remote controls, Jay provides solutions to the broad range of enhanced-safety industrial applications implementing button controls. By its modular design, Jay's UD system integrates a number of features in terms of:
 - Number of function buttons
 Type of function buttons
 - Position of function buttons
 - Number of output relays
 - Programming of relay / buttons assignments

Special attention has been given to ensure operator comfort through the following features:

- Ergonomic transmitters enabling one-hand control
- Control button accessibility
- Button touch sensitivity Identification of controlled functions
- •
- Light-weight compact transmitters Transmitter endurance, and fast, easy to replace plug-in battery
- Adaptability to all radio configurations of the environment by possibility for changing frequency by a trained operator •
- Mechanical protection of function buttons to avoid any unintentional action
- Transmitter handle for belt fastening clip when unit is idle or removable shoulder strap (optional accessories)

The receiver is also very easy to install:

- Compact receiver
- Spring-type connection terminals

To further enhance safety when using this equipment, technical solutions and

- Innovative options are also proposed:
 Access is enabled by electronic key to an authorised operator only
 Infrared start-up validation (option) to limit startup in a given area and ensure identification of equipment started up
 - Memorisation of use of remote control by recording number of operations and durations for each movement (option)

Easy maintenance:

- Customization entirely stored in electronic key
- Parameter definition software (option)
- Diagnostic aid indicator lights

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ΟΝΤΕΝΤ

Compliance with European directives:

- Machinerv

- **Emergency stop Performance**
- > EN ISO 13849-1 : 2015 for PL d
- performance level (categorie 3)
- > EN 61508 Parts 1 to 3 : 2010 for SIL 2
- > EN ISO 13850 (2015) Clause 4.14 Stop Categorie 0
- Hertzian equipment and telecommunication terminals (low voltage, EM compatibility, radiofrequency spectrum)
- USA FCC certification (American regulation PFF part 15) only for transmitters UDE and UDR

• Compliance with applicatives standards:

- EN15011 (travelling cranes)
- EN13557 (lifting machines with suspended load)



2- Product features

2.1 URE transmitter

The transmitter is formed by a hand-held unit having 2 or 4 function buttons, a «On/Horn» button and an emergency stop palmswitch. The unit's highly adaptable design allows for installation, in each location, of 5 different types of function buttons as described below:

- 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 auto. return

Two parameters can be easily adapted to the environment by a trained operator:

- Operating radio frequency

- Duration of temporization for «dead man» function (Automatic shutdown of remote control in case of prolonged non use)

These operations are performed by procedures implementing buttons $n^{\circ}1$, $n^{\circ}2$, the emergency stop palmswitch and the «On/Horn» button, with no need to open the transmitter or receiver. The change of parameter can be however locked.

The electronic key contains all the parameters of the controlled receiver, it is possible to use an auxiliary transmitter only with the electronic key and a validation procedure.



2.2 UDE transmitter

The transmitters come in 3 models : 6 function buttons, 8 functions buttons or 10 function buttons. Each model also contains a «On/Horn» button and an emergency stop palmswitch.

The unit's highly modular design allows for installation, of 6 different types of function buttons as described opposite:

- 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

Two parameters can be easily adapted to the environment by a trained operator:

- Operating radio frequency
- Duration of temporization for «Standby mode» function (Automatic shutdown of remote control in case of prolonged non use)

These operations are performed by procedures implementing buttons n°1, n°2, n°3, the emergency stop palmswitch and the «On/Horn» button, with no need to open the transmitter or receiver.

The change of parameter can be however locked.

The electronic key contains all the parameters of the remote control, it is possible to use an auxiliary transmitter only with the electronic key and a validation procedure.



2.3 Transmitter function button labels

The various button functions are identified by means of adhesive labels placed in he recesses provided in the transmitter unit housing at each button location. The labels are supplied in the form of sheets with the various labels you will need for your application. Simply choose the labels corresponding to your configuration.



URR receiver 2.4

The receiver is formed by a basic PCB comprising 6 control relays. The basic board systematically comprises :

- 1 «Horn» relay (active when the transmitter «On/Horn» button is pressed, not auto-maintained)
- 2 safety relays (active when the transmitter «On/Horn» button is pressed, auto-maintained until passive or active stop)



2.5 UCR receiver

The receiver comes with:

- A basic board comprising 12 control relays.
 + 1 «Horn» relay (active when the transmitter «On/Horn» button is pressed, not auto-maintained)
 + 2 safety relays (active when the transmitter «On/Horn» button is pressed, auto-maintained until passive or active stop)
 Two types of power supply following version: 12-24 VDC or 48-230 VAC



2.6 UDR receiver

The receiver is formed by a basic board on which the following components can be connected:

- 2 to 3 boards with 6 control relays
- 1 RS232 serial link board for diagnostic and programming purposes (option and accessory)

The basic board systematically comprises:

- 1 «Horn» relay
- (active when the transmitter «On/Horn» button is pressed, not auto-maintained)
- 2 safety relays

(active when the transmitter «On/Horn» button is pressed, auto-maintained until passive or active stop)

- 3 terminal strips for UDF1 IR modules (option - see next page)



3- Additional options

3.1 DialogUD and DialogUR softwares

DialogUD and **DialogUR** provide help to **UD** system users for configuration, diagnostics and operating status consultation.

DialogUD is used to program **UDR** and **UCR** receivers, while **DialogUR** is dedicated to **URR** receiver.

These softwares provide the main remote intervention and remote maintenance functions:

- Programming of radio reception frequency.
- Programming of «transmitter button receiver relay» assignments.
- Programming of control button electrical interlocking.
- Diagnostic function for management of preventive maintenance on equipment (receiver relay transition counter, combined relay activation time and possibility for saving all **UD** system information).
- -Display of UDE transmitter operation to validate possible configuration changes.
- -Display of receiver radio quality rate to diagnose possible zones of disturbances.

Product references:

Software configuration required: Windows® 10 (registered trademark of Microsoft Corporation - USA).



3.2 IR start-up validation

Safety feature requiring IR validation to start up a remote controlled equipment can be used.

- To start the unit, the operator is required to point the transmitter toward the IR module installed on the equipment to be controlled (see positioning below). This ensures an error-free match-up between the transmitter and the equipment to be controlled.
- The IR start-up field of action has a range of 0 to 25 m (see Fig. A).
- 3 IR modules can be connected to the **UDR** receiver.

IMPORTANT The wiring of the UDF1 IR module(s) must be separate from the power cables and all other sources which may generate interference (power regulator, for example).

UDF1 IR modules position



Example of product configuration:

3.3 Transmitter-Receiver association on start-up

This function allows the operator to select the receiver(s) to be controlled.

During the start-up phase (transmitter switched on), an encoded infrared message is transmitted to the receiver(s) pointed to by the operator. This option thus enables several transmitters (with difference id code and frequency) to successively take control of the receiver(s). This is particularly useful when several receivers are implemented and you wish to operate any receiver with any transmitter with no mutual interference. This feature also allows you to select two receivers with one transmitter and have them operate simultaneously.

The infrared aiming characteristics are the same as those of the "start-up by infrared validation" option.

Example (overhead conveyor):



Reference for UDF1 IR modules: UDF1 Please, contact us for further information.

Safety aspects

The **UD** remote controls implement numerous safety features, in particular:

Transmitter/Receiver communication safety features:

- Permanent radio link : by its non-directional design and insensitivity to the presence of obstacles, the operator is protected from exposure to handling risks during precision manoeuvres and movements.
- Each transmitter+receiver pair has its own specific identity code. .
- Hamming distance (minimum number of bits that differ between 2 messages that are different) of 4.

Receiver safety features:

- A passive shutdown device shuts down the system if the radio link is jammed.
- Emergency stop Performance Level PL d per EN ISO 13849-1 (Cat.3 • per EN 954-1) is ensured by redundant control of the emergency stop circuit and use of guided contact safety relays.
- Contradictory commands can be interlocked electrically.

Transmitter safety features:

- An active priority general shutdown command is generated when the «stop palmswitch button» is pressed.
- An electronic key limits access to the system to authorised persons only.
- An indicator light indicates an alarm in the event of an insufficiently • charged battery.
- A «Standby mode» function shuts down the transmitter after a pre-programmed time period (1 to 98 mn or 1 to 99s) when no controls have been generated. This function can be disabled at any time to meet specific needs.
- Buttons protected mechanically against unintentional actions.

Functional safety features:

- Start-up sequences are implemented to ensure safe operation by a • trained, experienced operator.
- 55 ms response time compatible with the movement speeds of equipment . controlled.

Technical characteristics

URE transmitter

Mechanical, functional and environmental characteristics		
Housing	ABS, yellow, IP65, Mechanical button protection	
Weight (with battery)	240 g	
Dimensions	46 x 78 x 143 mm	
Operating temp. range	-20°C to +50°C	
Storage temp. range	-20°C to +50°C	
Fast charging temperature	0°C to +40°C	
Fast charging complete time	2 hours 30 min	
Electrical and radio characteristics		
Power supply	Lithium battery	
Endurance (buttons typical average use at +20°C)	50 hours / 50 % Transmit time	
Frequency	4 programmable frequencies in 433-434 MHz (see list below)	
Transmit power	<10 mW (license not required) built-in antenna	
Modulation	FM	
Average range (1)	230 m in typical industrial environment 600m in unobstructed area	



- Supplied with UWE202 and UWE207 accessories. - Electronic key and charging system are supplied with
- kits (see page 12).
- For a transmitter alone, add the required additional accessories.

Functionnal characteristics

Fonctions	 4 function buttons max. 5 different kinds of function buttons: one-step pushbutton (single speed) «BPSV» two-step pushbutton (double speed) «BPDV» rotary switch with 2 fixed positions «COM2» rotary switch with 3 fixed positions «COM3» rotary switch with 3 positions with auto. return «COM3R» 1 pushbutton «ON / Horn» 1 active priority emergency stop palmswitch 1 electronic key
«Dead man» (Automatic shutdown of transmitter)	Time is user-programmable
Indicator lights	1 orange «battery level» and «diagnostic» indicator light 1 green «on», «battery charge» and «diagnostic» indicator light

(1)= Range will vary according to environment conditions of transmitter and reception antenna (metal frameworks, walls ...).

5.2 Standard battery



UWB

Mechanical, functional and environmental characteristics UDB2 UWB ı ABS Choc, yellow ABS Choc, black Housing IP40 IP40 Technology NiMH NiMH Dimensions 40 x 96 x 23 mm 40 x 96 x 23 mm Storage temp. -30°C to +35°C -20°C to +35°C range

Charging		
	UDB2 👠	UWB
Charging temperature	0°C to +45°C	0°C to +35°C
Complete charging time	14 hours	7 hours
Indicator lights	Charging: 1 red light indicator on the battery Charge status: 1 red light indicator on transmitter (battery low)	Charging: 1 2-color indicator light on the battery: Orange = fast charge Green = slow charge and up-keep charge Charge status: 1 red light indicator on transmitter (battery low)
Power supply	by charger UBCU (110-230 Vac / 12 Vdc) by connector UBC1 (10 to 30 Vdc)	by charger UCCU (110-230 Vac / 5 Vdc) By voltage adapter UCC1 (6 V)

5.3 UDE transmitteur



Mechanical, functional and environmental characteristics		
Housing	ABS Choc, yellow, IP65	
Weight (with battery)	Housing model «6+2 buttons»: 400 g Housing model «8+2 buttons»: 450 g Housing model «10+2 buttons»: 490 g	
Dimensions	Housing model «6+2 buttons»: 232 x 82 x 64 mm Housing model «8+2 buttons»: 251 x 82 x 64 mm Housing model «10+2 buttons»: 288 x 82 x 64 mm	
Operating temp. range	-20°C to +50°C	
Storage temp. range (without battery)	-30°C to +70°C	
Storage temp. range (with battery)	-30°C to +35°C	
Attachment when idle	Wall (by handle) or belt (by clip)	
Electrical and radio characteristics		
Power supply	Plug-in UDB2 (standard) or UWB (fast charge)	
Endurance transmit time/buttons typical average use (at +25°C)	433-434 MHz bands: 24 hours / 50% transmit time 869 and 911-918 MHz : 20 hours / 50% transmit time	
Radio frequencies	64 user-programmable in 433-434 MHz bands 12 user-programmable in 869 MHz band 64 user-programmable in 911-918 MHz bands	

-	Supplied	with	UWE202	and	UWE207	accessories.
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- Electronic key, battery and charging system are supplied with the sets presented page 12.

- For a transmitter alone, add the additional and complementary accessories.

Transmit power (built-in antenna)	<10 mW (license not required) in 433-434 MHz and 869 MHz bands <94 dBµV/m in 911-918 MHz bands	
Modulation	FM	
Average range with with antenna VUA001A or VUA001B on UDR receiver (1)	100 m in typical industrial environment 300 m in unobstructed area	
Functionnal characteris	stics	
Functions	 6 differents kinds of fonctions buttons: One-step pushbutton (single speed): BPSV Two-step pushbuttons (double speed): BPDV Rotary switch with 2 fixed positions: COM2 Rotary switch with 3 fixed positions: COM3 Rotary switch with 3 positions with auto. return: COM3R Electronic switch with 3 fixed positions: BPTR 1 pushbutton «On/Horn» 1 active priority emergency stop palmswitch 1 electronic key 	
«Standby mode» function	User-programmable time delay, in 1 minute increments	
Indicator lights	1 red indicator light «battery level» and diagnostic 1 green indicator light «On» and diagnostic	

(1)= Range will vary according to environment conditions of transmitter and reception antenna (metal frameworks, walls ...).

5.4 URR receiver



Mechanical and environment withstand characteristics	
Housing	ABS, grey, IP65
Weight	1,1 Kg approx.
Dimensions	200 x 120 x 75 mm (without antenna and cable glands)
Operating temp. range	-20°C to +50°C
Storage temp. range	-30°C to +70°C
Cable lead-outs	Control outputs : 1 M25 plastic cable gland (cable diameter Ø 14 to 20 mm) Power supply or IR module : 1 M16 cover (cable diameter Ø 5 to 7 mm) (3)
Connection	Spring-type terminal strips for 0.08 ² to 2.5 ² section wires
Radio characteristics (complying with EN 300 220)	
Radio frequencies	64 user-programmable frequencies in 433-434MHz
Fixed antenna (4)	1/4 wave for 433-434 MHz bands Option: 1/2 wave with antenna extension
Sensitivity	Better than -100 dBm

Electrical characteristics

Power supply and consumption With : 2 safety relays, the «Horn» relay and 6 function relays pulled in	DC version: 12 Vdc, -5% to +30%, 550 mA 24 Vdc, -20% to +20%, 430 mA AC No 1 version: 24 Vac, -15% to +10%, 1 A 48 Vac, -15% to +10%, 475 mA AC No 2 version: 115 Vac, -15% to +10%, 200 mA 230 Vac, -15% to +10%, 90 mA
Control	1 «Horn» relay + 6 function relays
Safety	2 relays with linked and guided contacts
Outputs	Independent 1 NO contact relays - Category DC13 0,5 A / 24 Vdc , AC15 2 A / 230 Vac - Max. breaking capacity. 2000 VA - Max. current 8 A (control relay, Horn), 6 A (safety relays) - Min. current 10 mA (12 Vmin.) - Max. voltage 250 Vac - Service life with 230 Vac, 70 VA, cosphi=0,75 : Control relay, Horn relay: 3 x 10 ⁶ cycles Safety relays: 4,5 x 10 ⁶ cycles
Response time	- On start-up: 0,5 s max. - On control: 70 ms max.
Active shutdown time	160 ms max.
Passive shutdown time	1,15 s max.
Indicator lights	1 green indicator light : receiver power supply 1 red + 1 green diagnostic indicator lights 1 red status indicator light per relay
Power supply protection	Against polarity inversions for DC version Against overcurrent by fuse

(2)= Optional Infrared Module

(3)= The cover can be replaced by a plastic cable gland (standard PE) type M16 mounted in its place. The UDF1 infrared module is systematically delivered with one plastic M16 cable gland.
 (4)= Possibility of using a BNC plug-in antenna and antenna extension with kit ref. : OWR02.

5.5 UCR receiver



Mechanical and environment withstand characteristics		
Housing	ABS, grey, IP65	
Weight	1,2 kg approx.	
Dimensions	120 x 240 x 100 mm (without antenna and gland)	
Operating temp. range	-20°C to +50°C	
Storage temp. range	-30°C to +70°C	
Cable lead-outs	Control outputs: 1 M32 plastic cable gland (for cable diameter Ø 20 à 26 mm) Power supply: 1 M16 cover (for cable diameter Ø 5 to 7 mm) (1)	
Connection	Spring-type terminal strips for 0.08 ² to 2.5 ² section wires	
Radio characteristics (complying with EN 300 220)		
Radio frequencies	64 user-programmable frequ. in 433-434 MHz bands 12 user-programmable frequ. in 869 MHz band	
Fixed antenna (2)	1/4 wave for 433-434 MHz and 869 MHz bands Option: 1/2 wave with antenna extension	
Sensitivity	Better than -100 dBm	

(1)= The cover can be replaced by a plastic cable gland (standard PE) type M16 mounted in its place.

(2)= Possibility of using a BNC plug-in antenna and antenna extension with kit ref. : OWR02.

5.6 UDR receiver



Mechanical and environment withstand characteristics		
Housing	ABS, grey, IP65	
Weight	2 kg approx.	
Dimensions	160 x 250 x 120 mm (without antenna and gland)	
Operating temp. range	-20°C to +50°C	
Storage temp. range	-30°C to +70°C	
Cable lead-outs	Control: 1 plastic cable gland M32 (Ø 20 to 26 mm cables) IR Modules: 3 cover M16 (Ø 5 to 7 mm cables) (4) Power supply: 1 cover M16 (Ø 5 à 7 mm cables) (4)	
Connection	Spring-type terminal strips for 0.08 ² to 2.5 ² section wires	
Radio characteristics (complying with EN 300 220)		
Radio frequencies	64 user-programmable frequ. in 433-434 MHz bands 12 user-programmable frequ. in 869 MHz band 64 user-programmable frequ. in 911-918 MHz bands	
Antennas	1/4 wave for 433-434, or 869, or 911-918 MHz bands. Option 1/2 wave with antenna extension	
Sensitivity	Better than -100 dBm	

Electrical characteristics Power supply and DC version: consumption 12 Vdc, 0 to +25%, 675 mA and 188 mA idle 24 Vdc, -15% to +20%, 675 mA and 188 mA idle With : AC version: 2 safety relays + «horn» 48 Vac, -15% to +10%, 550 mA relay and 5 functions 230 Vac, -15% to +10%, 70 mA relays pulled in Control 12 relays + 1 «Horn» relay Safety 2 relays with linked and guided contacts Number of output 8 (including «RS1-RS2» safety relays and the «horn» relays simultaneously relay) controllable Independent 1 NO relays - Category DC13 0,5 A / 24 Vdc , AC15 2 A / 230 Vac - Max. breaking capacity: 2000 VA - Max. current: 8A (control relays and «Horn» relay), 6 A («Safety» relays) Outputs - Min. current: 10 mA (12 Vmin.), 100 mA recommended - Max. voltage: 250 Vac - Service life with 230 Vac, 70 VA, cosphi=0,75 : Control relay, Horn relay : 3 x 10⁶ cycles Safety relays : 4,5 x 106 cycles - On start-up: 0,5s max. **Response time** - On control: 70 ms max Active shutdown time 160 ms max. Passive shutdown time 1,15 s max. - 1 green indicator light: «Power supply ON» - 1 red indicator light: «wrong identity code» and Indicator lights «diagnostic» - 1 green indicator light: «radio link established» and «diagnostic»

- Against overcurrent by fuse

Electrical characteristics

Power supply protection

Power supply and consumption (5)	DC version: 12 Vdc, 0 to +25%, 675 mA and 188 mA idle 24 Vdc, -15% to +20%, 675 mA and 188 mA idle
With : 2 safety relays, 8 function relays pulled in, and 3 IR UDF1 modules connected to receiver	AC No 1 version: 24 Vac, -15% to +10%, 850 mA 48 Vac, -15% to +10%, 400 mA AC No 2 version: 115 Vac, -15% to +10%, 180 mA 230 Vac, -15% to +10%, 85 mA
Control	1 «Horn» relay + 12 or 18 function relays
Safety	2 relays with linked and guided contacts
Outputs	Independent 1 NO relays - Category DC13 0,5 A / 24 Vdc , AC15 2 A / 230 Vac - Max. breaking capacity: 2000 VA - Max. current: 8A (control relays and «Horn» relay), 6 A («Safety» relays) - Min. current: 10 mA (12 Vmin.), 100 mA recommended - Max. voltage: 250 Vac - Service life with 230 Vac, 70 VA, cosphi=0,75 : Control relay, Horn relay: 3 x 10 ⁶ cycles Safety relays: 4,5 x 10 ⁶ cycles
Response time	- On start-up: 0,5 s max. - On control: 55 ms max.
Active shutdown time	145 ms max.
Passive shutdown time	1,1 s max.
Indicator lights	 1 red «power on» indicator light 1 red indicator light + 1 green diagnostic indicator light 1 red status indicator light per relay
Power supply protections	- Against polarity inversions for DC versions - Against overcurrents by fuse

(3)= Optional Infrared Modules

(4)= The cover can be replaced by a plastic cable gland (standard PE) type M16 mounted in its place. The UDF1 infrared module is systematically delivered with one plastic M16 cable gland. (5)= The number of function relays controlled simultaneously is limited to 10 relays with 1 UDF1 module connected to UDR receiver, or to 9 relays with 2 UDF1 modules connected, or to 8 relays with 3 UDF1

modules connected.

6- Radio frequency tables

433-434 MHz bands

Channel N° Frequency MHz Channel N° Channel N° Frequency MHz 01 433,100 33 433,900 01 02 433,125 34 433.925 02 03 433,150 35 433,950 03 04 433,175 36 433,975 04 05 433,200 37 434,000 05 06 433,225 38 434,025 06 07 433,250 39 434,050 07 08 433,275 40 434,075 08 09 433,300 41 434,100 09 10 433,325 42 434,125 10 11 433,350 43 434,150 11 12 433,375 44 434,175 12 13 433,400 45 434,200 13 14 433,425 46 434,225 14 15 433,450 47 434,250 15 16 433,475 48 434,275 16 17 433.500 49 434.300 17 18 433.525 50 434.325 18 19 433.550 51 434.350 19 20 433.575 52 434,375 20 433,600 53 21 434,400 21 54 22 433,625 434,425 22 433,650 55 434,450 23 23 433,675 24 56 24 434,475 25 433,700 57 25 434,500 26 433,725 58 26 434,525 27 433,750 59 27 434,550 28 60 433,775 434,575 28 29 433,800 61 434,600 29 30 433,825 62 434,625 30 31 433,850 63 434,650 31 914,900 32 433,875 64 434,675 32 915,000

911-918 MHz bands only for UD transmitter												
Frequency MHz	Channel N°	Frequency MHz										
911,800	33	915,100										
911,900	34	915,200										
912,000	35	915,300										
912,100	36	915,400										
912,200	37	915,500										
912,300	38	915,600										
912,400	39	915,700										
912,500	40	915,800										
912,600	41	915,900										
912,700	42	916,000										
912,800	43	916,100										
912,900	44	916,200										
913,000	45	916,300										
913,100	46	916,400										
913,200	47	916,500										
913,300	48	916,600										
913,400	49	916,700										
913,500	50	916,800										
913,600	51	916,900										
913,700	52	917,000										
913,800	53	917,100										
913,900	54	917,200										
914,000	55	917,300										
914,100	56	917,400										
914,300	57	917,500										
914,400	58	917,600										
914,500	59	917,700										
914,600	60	917,800										
914,700	61	917,900										
914,800	62	918,000										
914,900	63	918,100										

869 MHz band only for UD transmitter

Channel N°	Frequency MHz
01	869,9875
02	869,9625
03	869,9375
04	869,9125
05	869,8875
06	869,8625
07	869,8375
08	869,8125
09	869,7875
10	869,7625
11	869,7375
12	869,7125

7- Dimensions

7.1 URE ransmitter



7.2 UDE Transmitter

(6+2, 8+2 and 10+2 button versions)

64



918,200

7.3 UDC1 wall bracket



7.5 UDF1 infra red module



7.4 UDB2/UWB charger, adapter and connector

(To charge UDB2 or UWB battery)



7.4 UDB2/UWB batteries



7.6 Lamp-horn

(Accessory included in the receiver option kit)



URCi-B industrial support charger



UCC• power supply adaptater (Charge voltage of the transmitter internal battery: between 5 and 6 Vdc)



UD Series - E330L - 0620

7.8 URR receiver



7.9 UCR receiver





7.10 UDR receiver



Selection guide, references for ordering 8-

Standard unit selection guide (transmitter + receiver) 8.1

Note: the letters W, X, Y and Z are additional references (please refer to the description on the next page).

URE	or UDE tra	nsmitter	URR RECEIVER	UCR RE	UDR REC	EIVERS				
							MMMAS			
Housing	Transr cont	nitter button figurations	6 relays	12 relays With dedicated second speed relay	12 relais With common second speed relay	12 relays	18 relays			
URE	20	2 two-step pushbuttons	UR1R14 <mark>XY</mark> 1						_	_
	11	4 one-step pushbuttons	UR2R14 <mark>XY</mark> 1					_	_	_
Ŵ	22	4 two-step pushbuttons	UR3R14 <mark>XY</mark> 1					_		
6 buttons		6 one-step pushbuttons	UD1R14 <mark>XYZ</mark>			UD1D29 <mark>XYZ</mark>			-	-
		6 two-step pushbuttons		UD2C140C <mark>Z</mark>	UD2C240 <mark>YZ</mark>	UD2D2 <mark>WXYZ</mark>			-	—
UDE 8 buttons		8 two-step pushbuttons			UD3C240 <mark>YZ</mark>	UD3D2 <mark>WXYZ</mark>		_	_	_
		6 two-step pushbuttons + 1 one-step pushbutton + 1 electronic switch with 3 positions			UD4C240 <u>YZ</u>	UD4D2 <mark>WXYZ</mark>			—	—
UDE 10 buttons		10 one-step pushbuttons			UD5C240 <mark>YZ</mark>		UD5D3 <mark>WXYZ</mark>		-	-
		10 two-step pushbuttons					UD6D3 <mark>WXYZ</mark>		-	-
i		6 two-step pushbuttons + 2 one-step pushbuttons + 2 electronic switches with 3 positions					UD7D3 <mark>WXYZ</mark>			_

Reference example:

UD3D292D3

Contents of this set:

1 UDE transmitter, 8 two-step pushbuttons, 915 MHz + 2 label sheets (ref: UWE202 and UWE207)
2 fast charge batteries ref: UWB (x2)
1 voltage adapter 12-24 Vdc (vehicle socket) / 6 Vdc ref: UCC1
1 UDR receiver, 12 relays, 915 MHz, with VUA001B antenna + 1 electronic key (to be connected to the transmitter UDE) + 1 wiring accessory for common line ref: DWR12

Sticky 4 ways color directional arrows ref: UWE002
 Sticky 4 ways color directional arrows ref: UWE002
 Installation guide and Quick Start
 With «start-up by IR validation» function and 2 IR modules ref: UDF1 (x2) supplied

 URE OR UD REPLACEMENT TRANSMITTER (optionnal transmitter, supplied without battery, without electronic key)					
UKE <u>V</u> 2GU-B IIREV110-R	Descriptions for letters <u>V, 1</u>	<u>N, X, Y</u> and <u>Z</u>			
 UREV220-B		URR RECEIVER	UCR RE	CEIVERS	UDR RECEIVERS
 		6 relays	dedicated second speed relay	with common second speed relay	12 ou 18 relays
UDE <u>V</u> 11100	<u>W</u> = Radio frequency	433 MHz	433 MHz 869 MHz (consult us)	433 MHz 869 MHz (consult us)	4 = 433 MHz 9 = 915 MHz 869 MHz (consult us)
 UDE <mark>V</mark> 22200 UDE <mark>V</mark> 22220	X = «Star-up by infrared validation» function	0 = without 1 = with star-up by IR validation function + 1 IR UDF1 supplied	without	without	0 = without 1 = with start-up by IR validation function + 1 IR UDF1 supplied 2 = with start-up by IR validation function + 2 IR UDF1 supplied 3 = with start-up by IR validation
 UDE <mark>\</mark> 222D0	Y = Receiver power supplier	A = 12-24 Vdc B = 24-48 Vac D = 115-230 Vac	48-230 Vac	A = 12-24 Vdc C = 48-230 Vac	tunction + 3 IR UDF1 supplied $\mathbf{A} = 12-24 \text{ Vdc}$ $\mathbf{B} = 24-48 \text{ Vac}$ $\mathbf{D} = 115-230 \text{ Vac}$
 		TRANSMITTE	ER URE	TRANS	MITTER UDE
 UDE <mark>V</mark> 11111 UDE <mark>V</mark> 22222	Z = Battery and battery charging accessory	1 = UCCU adapter + URCi-B support		 2 = 2 UWB fast UCCU char 3 = 2 UWB fast UCC1 volta 4 = 2 UDB2 st charger + 1 5 = 2 UDB2 st connector 	charge batteries + ger + UDC1 support charge batteries + ge adapter andard batteries + UBCU JDC1 support andard batteries + UBC1
 UDE <mark>\/</mark> 22217	V = Frequency band and «Star- up by IR yalidation» function	 2 = 433 MHz no IR 3 = 433 MHz with start-validation 	up by IR	$\begin{array}{l} \textbf{4}=~433~\text{MHz}\text{n}\\ \textbf{5}=~433~\text{MHz}\text{w}\\ \text{validation}\\ \textbf{R}=~915~\text{MHz}\text{n}\\ \textbf{T}=~915~\text{MHz}\text{m}\\ \text{validation}\\ \textbf{M}=~869~\text{MHz}\text{n}\\ \textbf{P}=~869~\text{MHz}\text{w}\\ \text{validation} \end{array}$	o IR ith start-up by IR o IR ith start-up by IR o IR vith start-up by IR

Referance example:

UDET222D0

UDE transmitter, 6 two-step pushbuttons + 1 one-step pushbutton + 1 electronic switch with 3 positions 915 MHZ frequency band, with «Start-up by IR validation» function, without battery, without electronic key + 2 label sheets (ref: UWE202 and UWE207) + 1 installation guide and Quick Start For the corresponding standard unit: **UD4D29(1,2** or **3)**(**A**,**B** or **D**)

8.3 Wiring diagram for standard units

8.3.1 Standard unit using URR receiver



Safety relays RS1 and RS2 are switched on by the green pushbutton «On/Horn» of UDE transmitter, and hold in position until the transmitter emergency stop palmswitch is pressed (active shutdown) or until the loss of the radio transmission (passive shutdown).

- (a)= The power supply connection depends on the type of receiver and the power supply required: terminals 2 - 1 for power supplies 24 Vdc, 24 Vac or 115 Vac terminals 3 - 1 for power supplies 12 Vdc, 48 Vac or 230 Vac.
- (b)= Relay life is increased by the use of surge limiters (ex.RC network for AC, Zener + diodes for DC, etc...)
- (c)= K1 and K2 contactors must have guided contacts

(d)= Elements which indicate start of remote controlled machines (ex.: horn, rotaring/flashing light, etc...)

			AC	TIV U	AT JRR	ED rec	rela eive	y of ∍r	the
			RK	R1	R2	R3	R4	R5	R6
	G b «Or	ireen utton n/Horn»	x						
	D1	1st step		x					
	ы	2nd step		x		x			
OPERATED button of the	B2	1st step			x				
URE	52	2nd step			x	x			
transmitter	D 2	1st step					x		
	5	2nd step					x		x
	D4	1st step						x	
	64	2nd step						x	x



Transmitter with 2 two-step pushbuttons

Unit réf:

Unit réf: UR3R14••1





Unit réf: UR2R14••1

with 4

one-step

			АСТ	IVAT	ED rel	ay of t	the UF	RR rec	eive
			RK	R1	R2	R3	R4	R5	R6
83 84		Green button «On/Horn»	X						
B1 B2		B1		x					
	OPERATED	B2			х				
	UDE	B3				х			
(STOP)	transmitter	B4					х		
		B5						х	
Iransmitter with 6 one-step pushbuttons		B6							х

Unit ref.: UD1R14•••

UD Series - E330L - 0620

8.3.2 Standard units using UCR receiver

RS1 and **RS2** safety relays are switched on by the green pushbutton «On/Horn» of UDE transmitter, and hold in position until the transmitter emergency stop palmswitch is pressed (active shutdown) or until the loss of the radio transmission (passive shutdown).



(a)= The power supply connection depends on the type of receiver and the power supply required:

terminals 2 - 1 for power supplies 48 Vac or 12 Vdc

terminals 3 - 1 for power supplies 230 Vac or 24 Vdc

(b)= Relay life is increased by the use of surge limiters (ex.RC network for AC, Zener + diodes for DC, etc...)

(c)= K1 and K2 contactors must have guided contacts

(d)= Elements which indicate start of remote controlled machines (ex.: horn, rotaring/flashing light, etc...)

						AC '	TIV (with	ATEI dedic) rela ated	ay of seco	the nd sp	UCR beed	rece relay	iver)		
				RK	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12
		Green «On/	button Horn»	x												
électronique		B1	1st step		X											
	BO	ы	2nd step		X	X										
B 5 B 6		B 2	1st step				x									
B 3 B 4		BZ	2nd step				x	x								
	OPERATED	D 2	1st step						x							
BI BZ	UDE	5	2nd step						x	х						
	transmitter	D4	1st step								X					
		D4	2nd step								x	x				
	-	DE	1st step										x			
(STOP)		БЭ	2nd step										х	x		
		BC	1st step												X	
Transmitter with 6 two-step		80	2nd step												X	X

Unit ref.: UD2C140C•

Units ref.: UD2C240 •• and UD3C240 ••



UD2C240•• Transmitter with 6 two-step pushbuttons



C b

Transmitter with 8 two-step pushbuttons

					AC.	TIVA (with	COMI) rela mon :	ay of secor	the l nd sp	JCR eed r	rece elay)	iver		
			RK	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12
	Green «On/ł	button Iorn»	х												
	R1	1st step		X											
	ы	2nd step		X		X									
	P2	1st step			x										
	D2	2nd step			x	x									
PERATED utton of the UDE	D2	1st step					x								
	БЭ	2nd step					x		x						
	D4	1st step						x							
	B4	2nd step						x	x						
transmitter	D.C.	1st step								x					
	DO	2nd step								x		X			
	BC	1st step									x				
	DO	2nd step									x	X			
-	D7	1st step											x		
	в/	2nd step											X		X
	DO	1st step												X	
	DO	2nd step												X	X

Unit ref.: UD5C240••



Transmitter with 10 one-step pushbuttons

				AC	TIVA	TE) rela	ay of	the r	eceiv	ver U	ICR		
		RK	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12
	Green button «On/Horn»	x												
	B1		X											
	B2			x										
	B3				X									
PERATED utton of the ransmitter	B4					X								
	B5						X							
UDE	B6							X						
-	B7								X					
	B8									X				
	В9										X			
	B10											x		

	Unit ref.: UD	4 C 24]●●													
						AC	TIV	ATEI) rela	ay of	the I	JCR	rece	iver		
				RK	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12
		Greer «On	n button /Horn»	х												
electronique 🔛		B1	1st step 2nd step		X X		Х									
		B2	1st step 2nd step			X X	X									
	ODEDATED	B3	1st step 2nd step					X X		Х						
		B4	1st step 2nd step						X X	X						
	OPERATED button of the	B5	1st step 2nd step								X X		X			
	UDE transmitter	В6	1st step 2nd step									X X	X			
			B7											Χ		
Transmitter with 6 two-step pushbuttons + 1 one-step pushbutton			BB												x	
+ 1 one-step pushbutton + 1 electronic switch with 3 positions		B8	B8													x
			B8												x	x

8.3.3 Standard units using receiver UDR

Safety relays RS1 and RS2 are switched on by the green pushbutton «On/Horn» of UDE transmitter, and hold in position until the transmitter emergency stop palmswitch is pressed (active shutdown) or until the loss of the radio transmission (passive shutdown).



(a)= The power supply connection depends on the type of receiver and the power supply required: terminals 23 - 21 for power supplies 12 Vdc, 24 Vac or 115 Vac terminals 22 - 21 for power supplies 24 Vdc, 48 Vac or 230 Vac

(b)= Relay life is increased by the use of surge limiters (ex.RC network for AC, Zener + diodes for DC, etc...)

(c)= K1 and K2 contactors must have guided contacts

(d)= Elements which indicate start of remote controlled machines (ex.: horn, rotaring/flashing light, etc...)

Unit ref.: UD4D2••••

ACTIVATED relay of the UDR receiver



Transmitter with 6 two-step pushbuttons + 1 one-step pushbutton + 1 electronic switch with 3 positions

			RK	Ra1	Ra2	Ra3	Ra4	Ra5	Ra6	Rb1	Rb2	Rb3	Rb4	Rb5	Rb6
	Greer «On	n button /Horn»	x												
	D1	1st step		Χ											
	Ы	2nd step		X		X									
	P2	1st step			X										
	DZ	2nd step			X	X									
	B 2	1st step					X								
	БЭ	2nd step					X		X						
	P/	1st step						X							
OPERATED button of the UDE	D4	2nd step						X	X						
	D5	1st step								X					
	55	2nd step								X		X			
	B6	1st step									X				
uansmitter	БО	2nd step									X	X			
		B7											X		
	B8	B 8												X	
		B8													x
		BB												x	x

Units ref.: UD2D2••••, UD3D2•••• and UD1D2••••



UD2D2••••

Transmitter with 6 two-step pushbuttons Receiver with 12 relays



UD3D2•••• Transmitter with 8 two-step pushbuttons Receiver with 12 relays



UD1D29••••

Transmitter with 6 one-step pushbuttons Receiver with 12 relays

				Α	CTI (w	VAT	'ED omm	rela non s	y of	the nd s		R re 1 rela	ceiv av)	er	
			RK	Ra1	Ra2	Ra3	Ra4	Ra5	Ra6	Rb1	Rb2	Rb3	Rb4	Rb5	Rb6
	Green «On/l	button Horn»	x												
	D1	1st step		X											
	ы	2nd step		X		X									
	B 2	1st step			X										
	DZ	2nd step			X	Х									
	D 2	1st step					X								
	В3	2nd step					Х		Х						
OPERATED utton of the UDE	R4	1st step						X							
	B4	2nd step						x	x						
transmitter	R5	1st step								X					
	55	2nd step								X		X			
	PC	1st step									X				
	DO	2nd step									X	X			
	D7	1st step											Х		
	БЛ	2nd step											X		X
	Do	1st step												X	
	Во	2nd step												X	X

Units ref.: UD6D3••• and UD5D3••••

					_						ED	olav	of th		DP re		or			
								F	().	v A I		n se	cond	ener		av)	er			
					RK	Ra1	Ra2	Ra3	Ra4	Ra5	Ra6	Rb1	Rb2	Rb3	Rb4	Rb5	Rb6	Rc1	Rc2	Rc3
			Green «On/	button Horn»	x															
			B1	1st step		X														
				2nd step		X		X												
			B2	1st step			X													
				2nd step			X	X												
00603•••(JD5D3••••		B3	1st step					X											
Transmitter	Transmitter		55	2nd step					X		X									
10 two-sten	wiui 10 one-sten		BA	1st step						X										
pushbuttons pushbuttons OPERATED		D4	2nd step						X	X										
Receiver	Receiver	button of the	DE	1st step								X								
with with 18 relays re	with 18	with 18 relays transmitter	65	2nd step								X		X						
	relays		В6	1st step									X							
				2nd step									X	Х						
			D7	1st step											X					
			В/	2nd step											Χ		X			
			Do	1st step												Х				
			BS	2nd step												X	Х			
				1st step														X		
			B9	2nd step														X		X
			Dic	1st step															X	
			B10	2nd step															Х	Х

Unit ref.: UD7D3••••





8.4 Selection guide for separate elements

8.4.1 URE Transmitter



Table of possible button types by row



	Left button	Right button	Description of button types	
1=	BPSV	BPSV	BPSV = Single speed	6
<mark>2</mark> =	BPDV	BPDV	pushbutton (one-step)	
3 =	BPSV	COM2	BPDV = Double speed pushbutton	1>2)
4 =	BPSV	COM3	(two-step)	
5 =	COM2	COM2	COM2 = Rotary switch with	G
6 =	COM2	COM3	2 fixed positions	
7 =	COM3	COM3	COM3 = Rotary switch with	
8 =	BPSV	COM3R	3 fixed positions	
9 =	COM2	COM3R	COM3R = Rotary switch with 3 positions	2
A =	COM3	COM3R	with automatic return to center	R
R =	COM3R	COM3R I		1-/

Reference example:

URE2150-B

Transmitter URE, 433-434 MHz bands, without «star-up by IR validation» function, button configuration : 1st row BPSV-BPSV, 2nd row COM2-COM2 Supplied with sheets UWE202 and

UWE207.

8.4.2 UDE transmitter





	Left button	Right button	Description of button types	
1 =	BPSV	BPSV	BPSV = Single speed	n
2 =	BPDV	BPDV	pushbutton (one-step)	
3 =	BPSV	COM2	BPDV = Double speed pushbutton	60
4 =	BPSV	COM3	(two-step)	9
5 =	COM2	COM2	COM2 = Rotary switch with	Δ.
6 =	COM2	COM3	2 fixed positions	$\underline{\mathbf{Y}}$
7 =	COM3	COM3	COM3 = Rotary switch with	2
8 =	BPSV	COM3R	3 fixed positions	P^{*}_{1}
9 =	COM2	COM3R		2*
A =	COM3	COM3R	COM3R = Rotary switch with 3 positions with automatic return to center	₽
B =	COM3R	COM3R		14/

(a) = Only in B8 for UDE 8 function buttons

Table of possible button types by row

Reference Example:

UDE013600-011

UDE transmitter, 433-434 MHz bands, 6+2 button version, without «Start-up by IR validation» option, button configuration : first row BPSV-BPSV, 2nd row BPSV-COM2, 3rd row COM2-COM3, the pre-programmed radio channel is 01 (433,1 MHz).

Delivered with:

- 1 electronic key
- 1 standard plug-in battery ref.: UDB2
- 1 kit of 6 colored labels «movements» ref.: UWE202
- 1 kit of 90 b/w labels «movements, special and customization functions» ref.: UWE207

8.4.3 Electronic keys

Electronic key URWE21-B or UDWE23 is supplied with each URR, UCR or UDR receiver.

An additional key can be necessary for each additional transmitter (replacement transmitter, transmitter for a second operator...) The additional key must be compatible with the transmitter and the receiver (id).

- To this end, please provide us:
- the number engraved onto the key (see picture 1 or 2)
- the receiver id (see picture 3)

Important note : the key will be on the factory radio channel, by default the pre-programmed channel is 01.

If the key is lost, please contact our technical support.

Electronic key for URE transmitter



Electronic key for UDE transmitter



Receiver label

UCROBM2		16	50/19
Freq: 433434.79 MHz	c	ode: C62C	IP65
Série: 191226306	Alim:48		

8.4.4 URR receiver



(1) = Only for replacement transmitter

Reference example: URR0C40-B-012 URR receiver, 433-434 MHz bands, without «start-up by IR validation» function, 6+3 output relays (6 function relays + 1 "On/Horn" relay + 2 safety relays), power supply 12 - 24 Vdc, without interlocking, if BPDV on the transmitter they order 3 relays, if COM3 and COM3R on the transmitter they are 1/OFF/2.

Supplied with:

1 electronic key including receiver id and configuration of the connected transmitter.

1 common wiring accessory ref.: UDWR12

8.4.5 UDR receiver

Reference:	
Type of communication and version: 0 = radio, 433-434 MHz bands 1 = radio, 433-434 MHz bands + «start-up by IR validation» function (1) A = radio, 869 MHz band B = radio, 869 MHz band + «start-up by IR validation» function (1) E = radio, 911-918 MHz bands F = radio, 911-918 MHz bands + «start-up by IR validation» function (1)	
Number of outputs: B = 3 (2) + 12 relays C = 3 (2) + 18 relays	
Power supply: 4 = 12 - 24 Vdc A = 24 - 48 Vac B = 115 - 230 Vac	
Additional option: 0 = standard (without additional option)	
Programming of interlocking between pushbutton (BPSV or BPDV type) No1 and No2, No3-No4, and No5-No6:	
0 = no interlocking or COM (rotary switch) on each row 1 = interlocking with output relays set to OFF 2 = interlocking with priority on left button (No1, No3 and No5 buttons) 3 = interlocking with priority on right button (No2, No4 and No6 buttons)	
Programming of button - relay correspondence Transmitter UDE button - Receiver UDR relay : Number of transmitter relays controlled by BPDV (double speed pushbutton)	
 1 = 3 controlled relays or no BPDV on transmitter 2 = 4 controlled relays X = special (equipment definition covered by a customization data sheet) 	
Programming of button - relay correspondence Transmitter UDE button - Receiver UDR relay : Type of control for COM3 and COM3R (switches with 3 positions)	
1 = Type: 1/1+2/2 or no COM3/COM3R on transmitter 2 = Type: 1/0FF/2 3 = Type: 1/2/1+2 X = spécial (equipment definition covered by a customization data sheet)	
(1) = This only includes the required programming for the receiver. The UDF1 IR modules must be ordered separately.	Reference example:
(2) = 2 safety relays + 1 «On/Horn» relay	UDR0BB00-112

Receiver UDR, 433-434 MHz bands, without «Start-up by IR validation» option, 3+12 relays, power supply : 115-230 Vac, without programmed interlocking, without BPDV on transmitter, COM3/COM3R on the transmitter are: 1/0FF/2.

Supplied with: - 1 common wiring accessory ref.: UDWR12 - 1 sticky 4 ways color directional arrows ref.: UWE002

8.5 Selection guide for accessories

8.5.1 Selection guide for transmitter UDE accessories

Reference	Description	Picture
UDB2	Standard plug-in battery (yellow) for UDE transmitter	1
UWB	Fast charge plug-in battery (black) for UDE transmitter	
UBCU	Charger for standard plug-in battery UDB2, 110-230 Vac / 12 Vdc with plugs EU, UK and US $$	
UCCU	Charger for fast charge plug-in UWB battery or URCi-B charger, 110-230 Vac / 5 Vdc with plugs EU, UK and US	
UBC1	Power supply / battery connector (10 to 30 Vdc max.) (for standard plug-in battery UDB2)	
UCC1	Voltage adapter 12-24 Vdc (vehicle socket) / 6 Vdc (for fast charge plug-in battery UWB) or URCi-B charger	
UCC4	Voltage adaptater on DIN rail 24 Vdc / 5 Vdc for URCi-B charger	
UDC1	Wall bracket for stowing and battery charging when idle	
URWE21-B	Programmed electronic key for URE transmitter (please let us know key number)	117-teo
UDWE23	Programmed electronic key for UDE transmitter (please let us know key number)	
OWE20	Neck strap	Ś
UWE103	Carry strap for URE transmitter	
UWE104	3 points removable shoulder strap for UWE103 carry strap	
UDP1	Belt fastening clip	
UWE102	Removable shoulder strap equipped with two metal hooks. Max length: 1,5 m	
UWE30•	Protective case for transmitter: UWE301: for transmitter 6+2 button version UWE302: for transmitter 8+2 button version UWE303: for transmitter 10+2 button version	
UWE202	Kit of 6 colored labels «movements» for two-step pushbuttons (double speed) (6,4 x 22 mm)	
UWE205	Kit of 48 white blank labels for cutomized marking (6,4 x 22 mm)	
UWE207	Kit of 90 b/w labels «movements, special and customization functions» for pushbuttons and switches (6,4 x 22 mm)	CO TO

8.5.2 Selection guide for receiver accessories

8.5.2.1 Antennas

Note for URR and UCR receivers : kit ref.: OWR02 (next page) is required to connect a removable antenna or antenna extension to a BNC connector.

Description	Reference for use in 433-434 MHz frequency bands (A)	Reference for use in 869 and 911-918 MHz frequency bands (B)	Picture		
Straight antenna, 1/4 wave, BNC (1)	VUA001A	VUA001B	approximate length : (A) = 190 mm ; (B) = 90 mm		
Straight antenna, 1/2 wave, BNC	VUA002A	VUA002B	approximate length : (A) = 335 mm ; (B) = 250 mm		
Through insulated remote antenna, 1/2 wave, with 0,5 m BNC cable	VUA100AH	VUA100BH			
Through insulated remote antenna, 1/2 wave, with 2 m BNC cable	VUA102AH	VUA102BH			
Through insulated remote antenna, 1/2 wave, with 5 m BNC cable	VUA105AH	VUA105BH	approximate length : (A) = 320 mm ; (B) = 190 mm Required drill hole Ø15 mm		
Through insulated remote antenna, 1/2 wave, with 10 m BNC cable	VUA110AH	VUA110BH			
Insulated and magnetic remote antenna, 1/2 wave, with 3 m BNC cable	VUA103AM	VUA103BM			
Insulated and magnetic remote antenna, 1/2 wave, with 5 m BNC cable	VUA105AM	VUA105BM	approximate length : (A) = 440 mm ; (B) = 320 mm		
Through uninsulated remote antenna, 1/4 wave, with 3 m BNC cable	VUA103AV	VUA103BV	kan		
Through uninsulated remote antenna, 1/4 wave, with 5 m BNC cable	VUA105AV	VUA105BV	(antenna to be mounted on a not grounded metal surface) approximate length : (A) = 180 mm ; (B) = 100 mm Required dtil hole 012 mm or 019 mm (according to the type of mounting)		

(1) : antenna supplied as standard with the receiver UDR

8.5.2.2 Various accessories

Reference	Description	Picture
UCWR38	Lamp-Horn with cable and magnetic fastener (48 Vac - 200 mA)	₽ ³
OWR02	BNC connector kit and antenna extension with tuner prowave new 2020	
UWE002	4 self-adhesive directional colored arrows on travelling cranes (4 x 122 x 180 mm)	
UDF1	1 infrared module (included: 10 m cable, a plastic M16 cable gland and a mounting bracket) for «start-up with infrared validation» option	
UDWR10	10 m cable extension + connector, for infrared module	
UDWR12	Common wiring accessory	
UDWR32	Serial link board + cord to be connected to intermediate cables UDWR37 + UDWR39 (to be ordered separately). DialogUD and DialogUR softwares are available on www.jay-electronique.com website	to UDWR37
UDWR37	Cable connecting the UDWR32 serial link board cable and the UDWR39 Serial / USB interface cable	to UDWR39 to UDWR32
UDWR39	Serial / USB interface cable between UDWR37 cable and PC computer	to PC
UDWR38	Fastening Kit for receivers by 4 magnetic contacts	
UDWR13	2 m cable + 24-pin male connector	Receiver wiring side
UDWR14	2 m cable + 16-pin male connector	Beceiver wiring side

The products presented in this document are subject to change. Product descriptions and characteristics are not contractually binding. Please go to our website www.jay-electronique.com to download the most recent updates to our documentation.

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