Industrial enhanced-safety radio remote controls
UD Series
CE

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

1- 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

CONTENTS

- **Compliance with European directives:**
  - Machinery
    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)

CONDUCTIX wampfler

E330M - 1021

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:
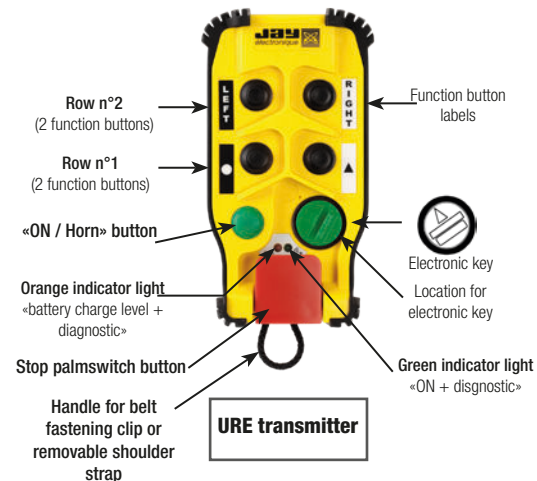
- One-step pushbutton (single speed)
- Two-step pushbutton (double speed)
- Rotary switch with 2 fixed positions
- Rotary switch with 3 fixed positions
- Rotary switch with 3 positions with auto. return

Two parameters can be easily adapted to the environment by a trained operator:
- Operating radio frequency
- Duration of temporization for «standby» function (Automatic shutdown of remote control in case of prolonged non use)

These operations are performed by procedures implementing buttons n°1, n°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.

Row n°2 (2 function buttons)
Row n°1 (2 function buttons)
«ON / Horn» button
Orange indicator light «battery charge level + diagnostic»
Stop palmswitch button
Handle for belt fastening clip or removable shoulder strap
Function button labels
Electronic key
Location for electronic key
Green indicator light «ON + disgnostic»
URE transmitter

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
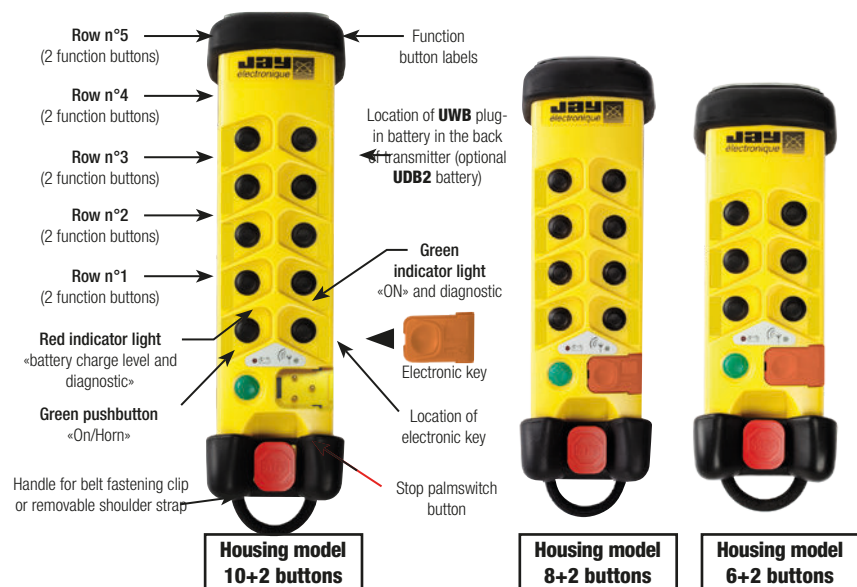- Electronic switch with 3 fixed positions

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.
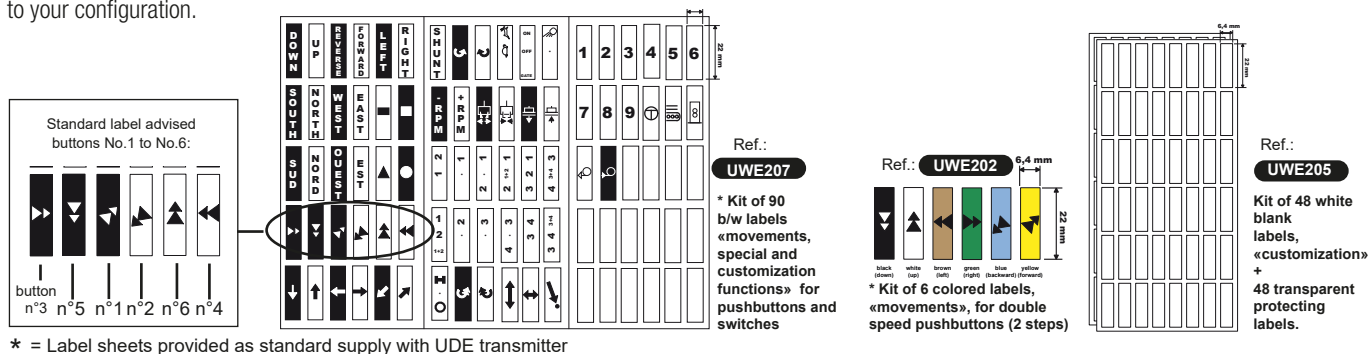
The change of parameter can be however locked.

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.

Row n°5 (2 function buttons)
Row n°4 (2 function buttons)
Row n°3 (2 function buttons)
Row n°2 (2 function buttons)
Row n°1 (2 function buttons)
Red indicator light «battery charge level and diagnostic»
Green pushbutton «On/Horn»
Handle for belt fastening clip or removable shoulder strap
Function button labels
Location of UWB plug-in battery in the back of transmitter (optional UDB2 battery)
Green indicator light «ON» and diagnostic
Electronic key
Location of electronic key
Stop palmswitch button
Housing model 10+2 buttons
Housing model 8+2 buttons
Housing model 6+2 buttons

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.
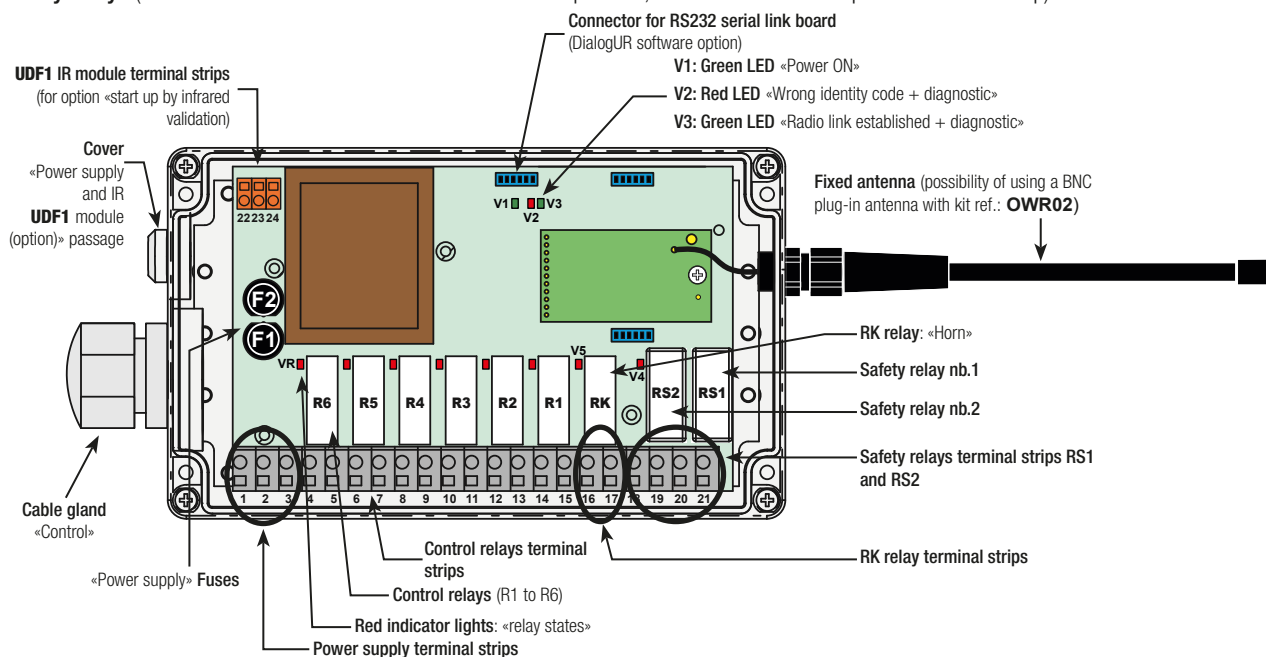
Standard label advised buttons No.1 to No.6:

button n°3 n°5 n°1 n°2 n°6 n°4

Ref.: **UWE207**
* Kit of 90 b/w labels «movements, special and customization functions» for pushbuttons and switches

Ref.: **UWE202**
black (down) white (up) brown (left) green (right) blue (backward) yellow (forward)
* Kit of 6 colored labels, «movements», for double speed pushbuttons (2 steps)

Ref.: **UWE205**
Kit of 48 white blank labels, «customization» + 48 transparent protecting labels.

✱ = Label sheets provided as standard supply with UDE transmitter

2.4 URR receiver

The receiver is formed by a basic PCB comprising 6 control relays. The basic board systematically comprises :
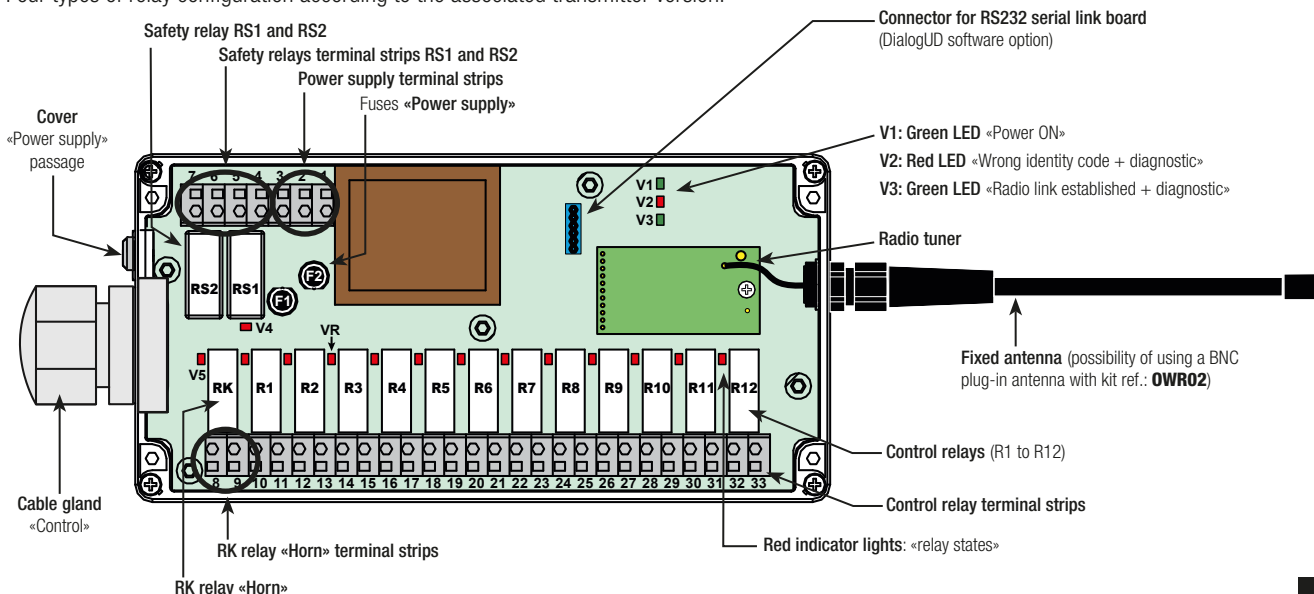- **1 «Horn» relay** (active when the transmitter «On/Horn» button is pressed, not auto-maintained)
- **2 safety relays** (active when the transmitter «On/Horn» button is pressed, auto-maintained until passive or active stop)

Connector for RS232 serial link board
(DialogUR software option)
V1: Green LED «Power ON»
V2: Red LED «Wrong identity code + diagnostic»
V3: Green LED «Radio link established + diagnostic»

UDF1 IR module terminal strips
(for option «start up by infrared validation)

Cover
«Power supply and IR
UDF1 module
(option)» passage

Fixed antenna (possibility of using a BNC plug-in antenna with kit ref.: **OWR02**)

RK relay: «Horn»
Safety relay nb.1
Safety relay nb.2
Safety relays terminal strips RS1 and RS2

Cable gland
«Control»

«Power supply» **Fuses**

RK relay terminal strips

Control relays terminal strips
Control relays (R1 to R6)
Red indicator lights: «relay states»
Power supply terminal strips

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
- Four types of relay configuration according to the associated transmitter version.

Safety relay RS1 and RS2
Safety relays terminal strips RS1 and RS2
Power supply terminal strips
Fuses **«Power supply»**

Connector for RS232 serial link board
(DialogUD software option)

Cover
«Power supply» passage

V1: Green LED «Power ON»
V2: Red LED «Wrong identity code + diagnostic»
V3: Green LED «Radio link established + diagnostic»

Radio tuner

Fixed antenna (possibility of using a BNC plug-in antenna with kit ref.: **OWR02**)

Cable gland
«Control»

Control relays (R1 to R12)

Control relay terminal strips

Red indicator lights: «relay states»

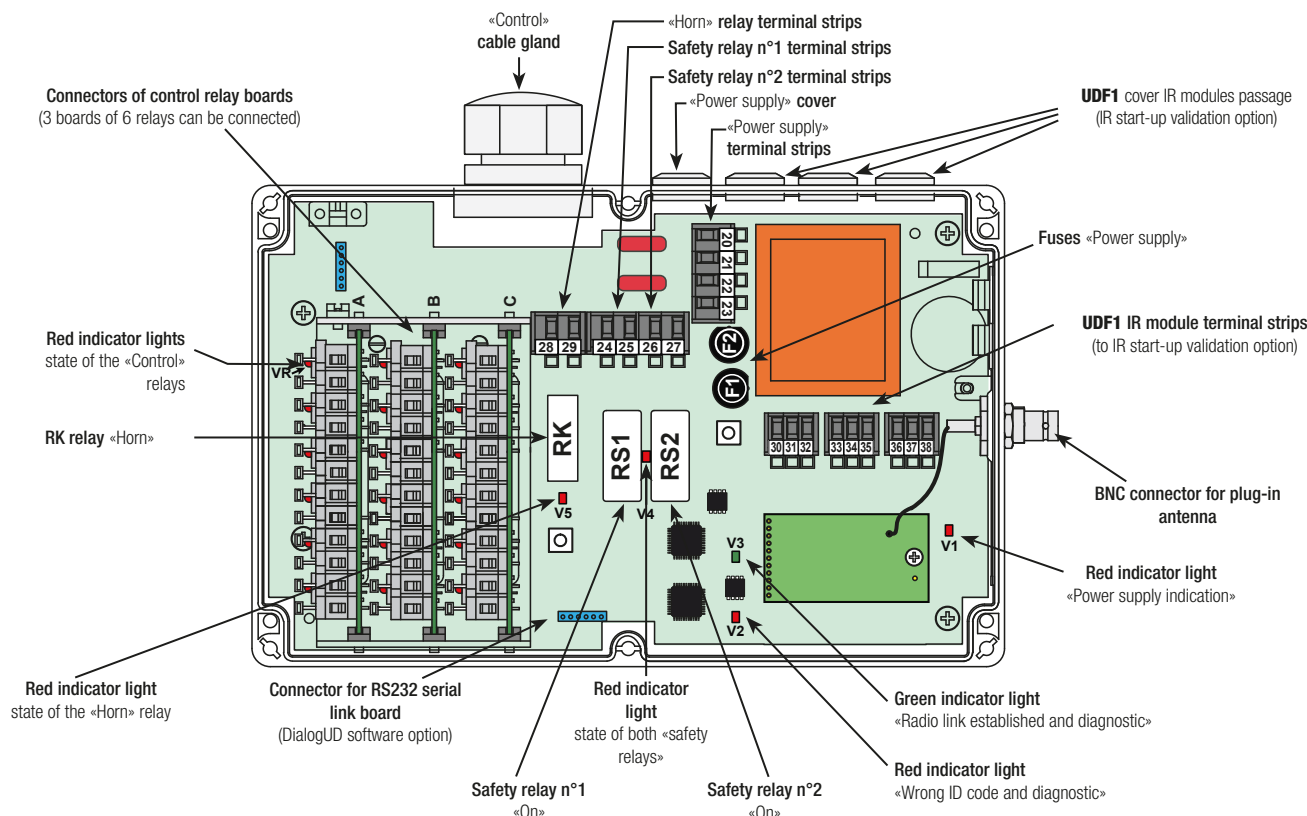**RK relay «Horn» terminal strips**

RK relay «Horn»

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)

«Control» cable gland

«Horn» relay terminal strips
Safety relay n°1 terminal strips
Safety relay n°2 terminal strips
«Power supply» cover
«Power supply» terminal strips

Connectors of control relay boards
(3 boards of 6 relays can be connected)

UDF1 cover IR modules passage
(IR start-up validation option)

Fuses «Power supply»

Red indicator lights
state of the «Control» relays

UDF1 IR module terminal strips
(to IR start-up validation option)

RK relay «Horn»

BNC connector for plug-in antenna

Red indicator light
«Power supply indication»

Green indicator light
«Radio link established and diagnostic»

Red indicator light
state of the «Horn» relay

Connector for RS232 serial link board
(DialogUD software option)

Red indicator light
state of both «safety relays»

Safety relay n°1 «On»

Safety relay n°2 «On»

Red indicator light
«Wrong ID code and diagnostic»

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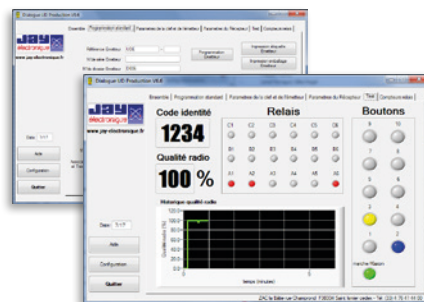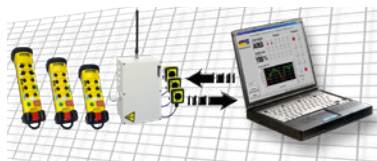
These softwares provide the main remote intervention and remote maintenance functions:

- 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:
The «**DialogUD** or **DialogUR**» option requires an RS232 communication card to be connected into the receiver and two connection cables to a computer:
DialogUD or DialogUR software: .... **available on www.jay-electronique.com website**
UDR serial connection card + M12-SUB D9 cable:.................................... **UDWR32**
SUB D9-USB adapter:.. **UDWR39**

Software configuration required: Windows® 10 (registered trademark of Microsoft Corporation - USA).
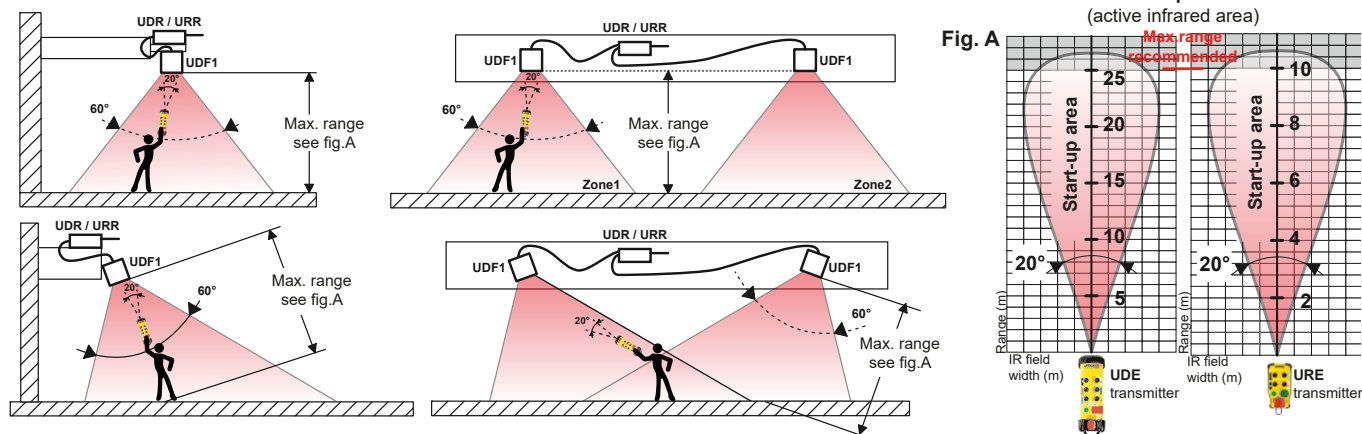
3.2 IR start-up validation

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

Fig. A — Start-up area (active infrared area)

Example of product configuration:

The *«IR start-up validation»* option requires a transmitter equipped with this option, a receiver programmed for this option and at least one **UDF1** IR module.

Transmitter reference: .... **UDE** (**5** or **P** or **T**)•••••
Receiver reference: .... **UDR**(**1** or **B** or **F**)••00
Reference for UDF1 IR modules: **UDF1**

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):
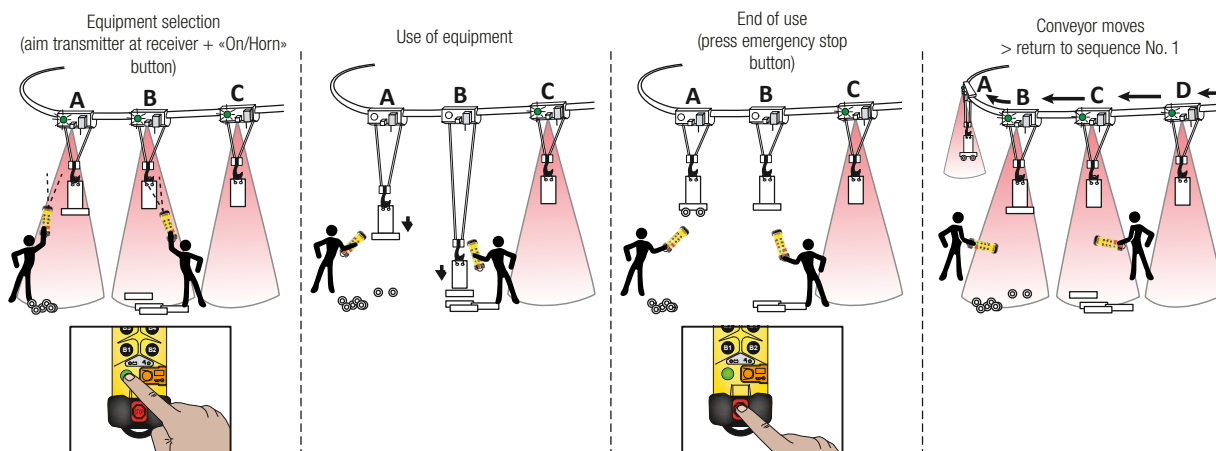
Example of product configuration:

Transmitter reference: .... **UDE** (**5** or **P** or **T**)•••••
Receiver reference: .... **UDR**(**1** or **B** or **F**)••06
Reference for UDF1 IR modules: **UDF1**
Please, contact us for further information.

4- 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.

5- Technical characteristics

5.1 URE transmitter

- 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.

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

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
«Standby mode»	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

UDB2   UWB

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

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 (12V/5V)

5.3 UDE transmitteur

- Supplied with UWE202 and UWE207 accessories.
- Electronic key, battery and charging system are supplied with the sets presented page 12.
- For a transmitter alone, add the additional and complementary accessories.

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

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 characteristics	
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

(2)

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 0.08² to 2.5² 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: 3×10^6 cycles Safety relays: $4,5 \times 10^6$ 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 0.08² to 2.5² 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

Electrical characteristics	
Power supply and consumption With : 2 safety relays + «horn» relay and 5 functions relays pulled in	DC version: 12 Vdc, 0 to +25%, 675 mA and 188 mA idle 24 Vdc, -15% to +20%, 675 mA and 188 mA idle AC version: 48 Vac, -15% to +10%, 550 mA 230 Vac, -15% to +10%, 70 mA
Control	12 relays + 1 «Horn» relay
Safety	2 relays with linked and guided contacts
Number of output relays simultaneously controllable	8 (including «RS1-RS2» safety relays and the «horn» relay)
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 10⁶ cycles Safety relays : 4,5 x 10⁶ cycles
Response time	- On start-up: 0,5s 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: «Power supply ON» - 1 red indicator light: «wrong identity code» and «diagnostic» - 1 green indicator light: «radio link established» and «diagnostic»
Power supply protection	- Against overcurrent by fuse

(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

(3)

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 0.08² to 2.5² 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 consumption (5) With : 2 safety relays, 8 function relays pulled in, and 3 IR UDF1 modules connected to receiver	DC version: 12 Vdc, 0 to +25%, 675 mA and 188 mA idle 24 Vdc, -15% to +20%, 675 mA and 188 mA idle 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 10⁶ cycles Safety relays : 4,5 x 10⁶ 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°	Frequency MHz
01	433,100	33	433,900
02	433,125	34	433,925
03	433,150	35	433,950
04	433,175	36	433,975
05	433,200	37	434,000
06	433,225	38	434,025
07	433,250	39	434,050
08	433,275	40	434,075
09	433,300	41	434,100
10	433,325	42	434,125
11	433,350	43	434,150
12	433,375	44	434,175
13	433,400	45	434,200
14	433,425	46	434,225
15	433,450	47	434,250
16	433,475	48	434,275
17	433,500	49	434,300
18	433,525	50	434,325
19	433,550	51	434,350
20	433,575	52	434,375
21	433,600	53	434,400
22	433,625	54	434,425
23	433,650	55	434,450
24	433,675	56	434,475
25	433,700	57	434,500
26	433,725	58	434,525
27	433,750	59	434,550
28	433,775	60	434,575
29	433,800	61	434,600
30	433,825	62	434,625
31	433,850	63	434,650
32	433,875	64	434,675

911-918 MHz bands only for UD transmitter			
Channel N°	Frequency MHz	Channel N°	Frequency MHz
01	911,800	33	915,100
02	911,900	34	915,200
03	912,000	35	915,300
04	912,100	36	915,400
05	912,200	37	915,500
06	912,300	38	915,600
07	912,400	39	915,700
08	912,500	40	915,800
09	912,600	41	915,900
10	912,700	42	916,000
11	912,800	43	916,100
12	912,900	44	916,200
13	913,000	45	916,300
14	913,100	46	916,400
15	913,200	47	916,500
16	913,300	48	916,600
17	913,400	49	916,700
18	913,500	50	916,800
19	913,600	51	916,900
20	913,700	52	917,000
21	913,800	53	917,100
22	913,900	54	917,200
23	914,000	55	917,300
24	914,100	56	917,400
25	914,300	57	917,500
26	914,400	58	917,600
27	914,500	59	917,700
28	914,600	60	917,800
29	914,700	61	917,900
30	914,800	62	918,000
31	914,900	63	918,100
32	915,000	64	918,200

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
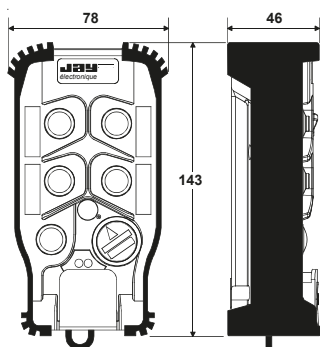
7.2 UDE Transmitter
(6+2, 8+2 and 10+2 button versions)

7.3 UDC1 wall bracket

127 mm
41 mm
56 mm
22 mm
Ø4 mm

Battery
UDB2 or
UWB

To charger
or
connector

Transmitter
UDE

200
mm
min.

7.4 UDB2/UWB batteries

UDB2
(standard)

yellow

UWB
(fast charge)

black

40 mm

23 mm

96
mm

7.5 UDF1 infra red module

62 mm
45 mm
64 mm
51 mm

Ø5 mm

Mounting bracket
(supplied)

Ø6 mm
12 mm
R= 24 mm
30°
64 mm
16 mm
14 mm
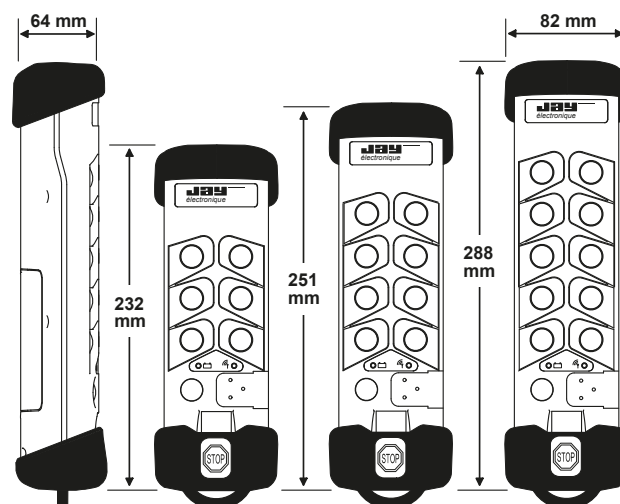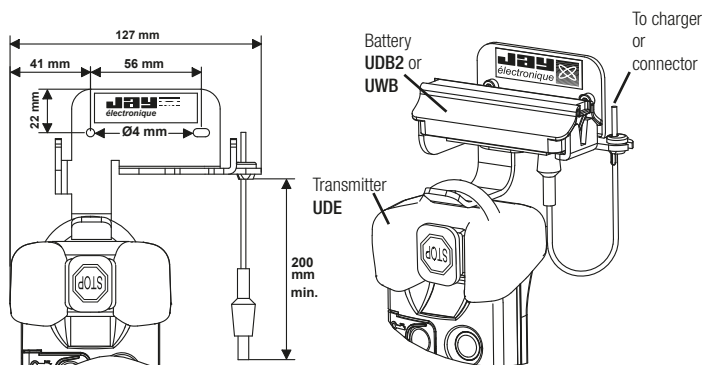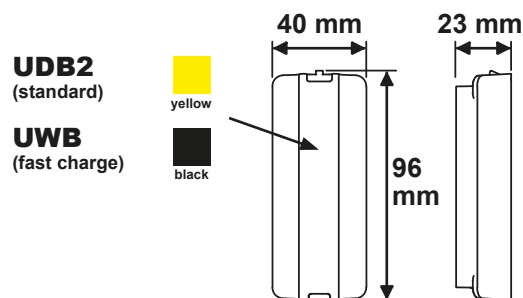
UDF1 module
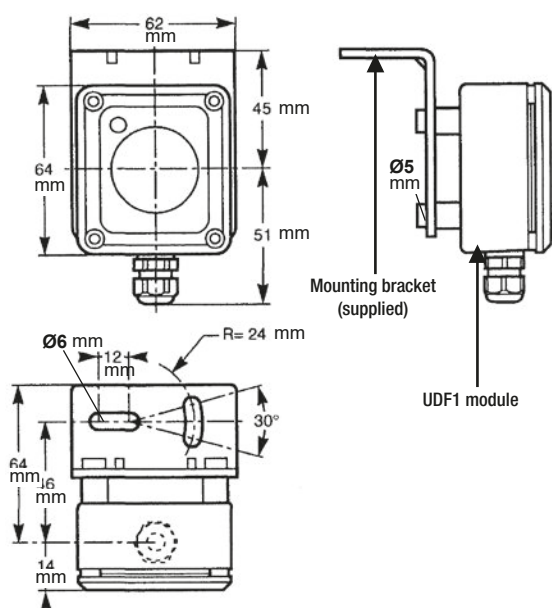
7.6 Lamp-horn
(Accessory included in the receiver option kit)

2 x Ø4,5 mm

55 mm

150 mm

256 mm

45 mm

70 mm
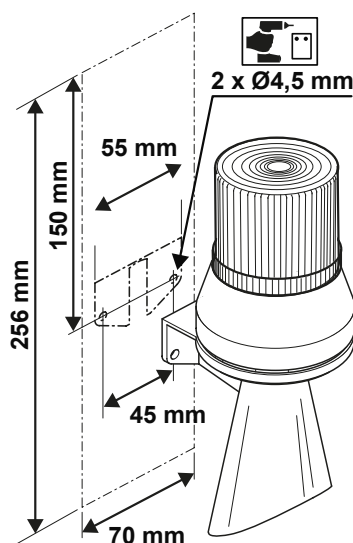
7.4 UDB2/UWB charger, adapter and connector
(To charge **UDB2** or **UWB** battery)

UBCU To charge **UDB2**
110-230 Vac / 12Vdc, with
plugs EU, UK et US

UCCU To charge **UWB**
110-230 Vac / 5Vdc, with plugs
EU, UK et US

EU
UK
US
40 mm
60 mm
28 mm
~ 1,80 m

UBC1 To charge **UDB2**
Connector to be connected
to stabilized power supply or
battery, 10 to 30 Vdc

~ 1,70 m

black/white wire = +

UCC1 To charge **UWB**
Voltage adapter on vehicle
socket.

56 mm
68 mm
80 mm
25 mm
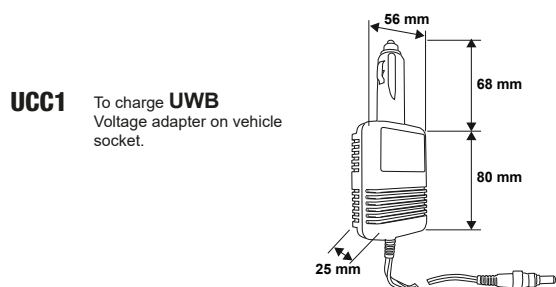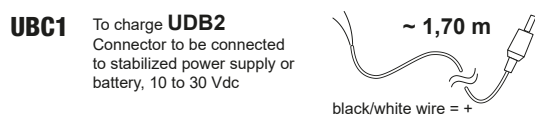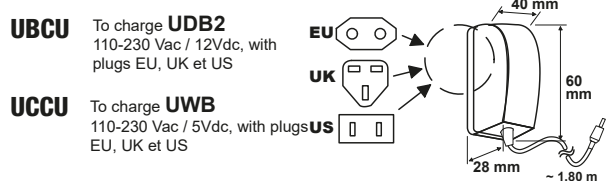
URCi-B industrial support charger

48
73
63
4.2
185
60 ± 2.5
60 ± 2.5
1,70 m
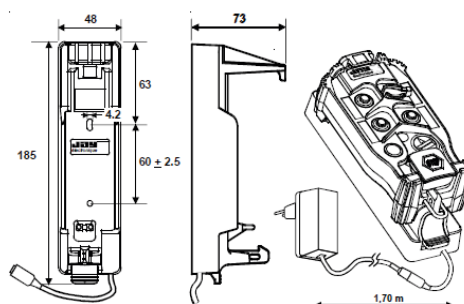
UCC● power supply adaptater
(Charge voltage of the transmitter internal battery: between 5 and 6 Vdc)

UCC4
(on DIN rail 24VDC/5VDC)

UCC1
(12-24VDC/6VDC vehicle plug)
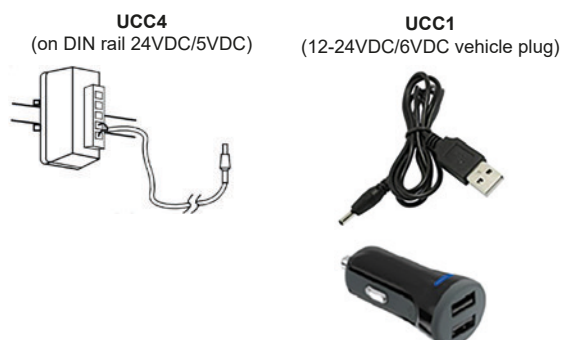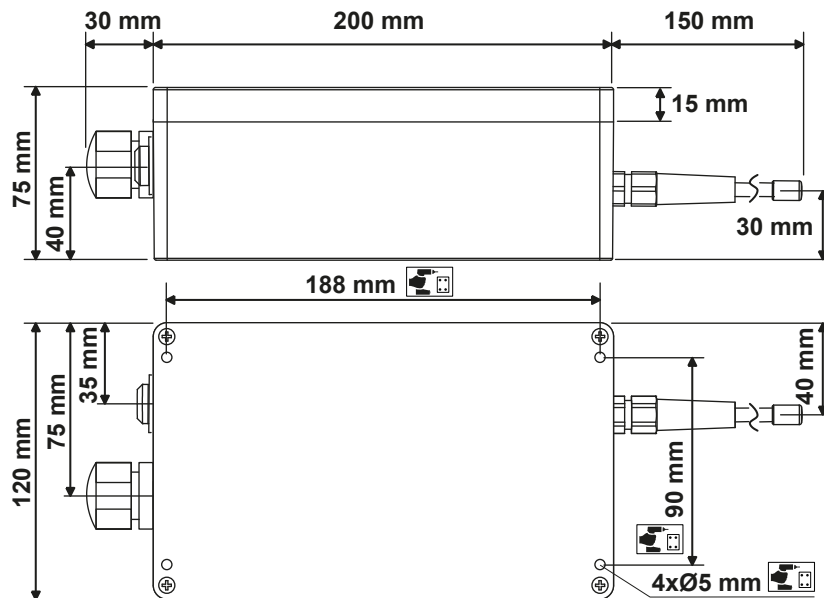
7.8 URR receiver

7.9 UCR receiver
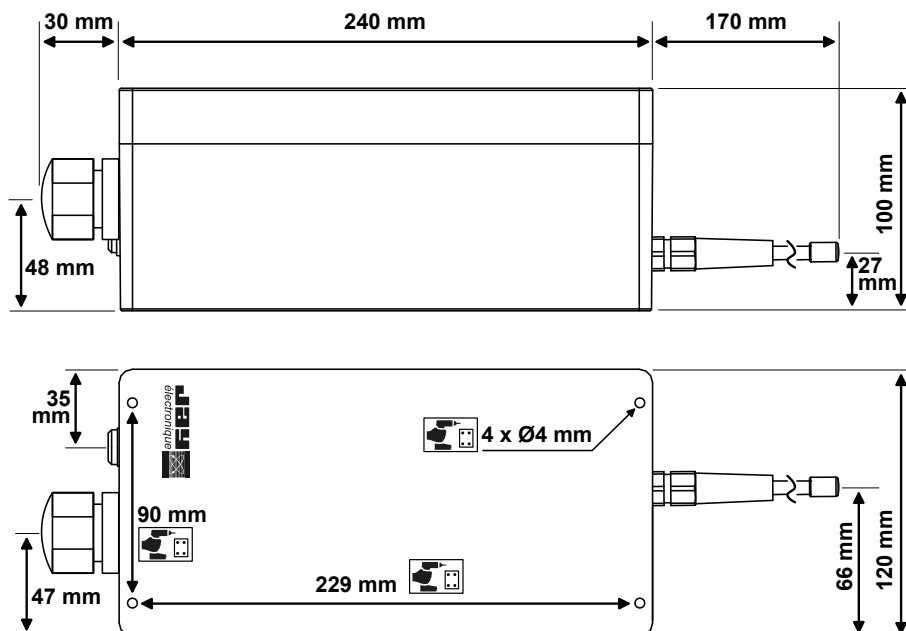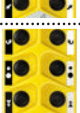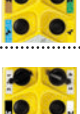
7.10 UDR receiver
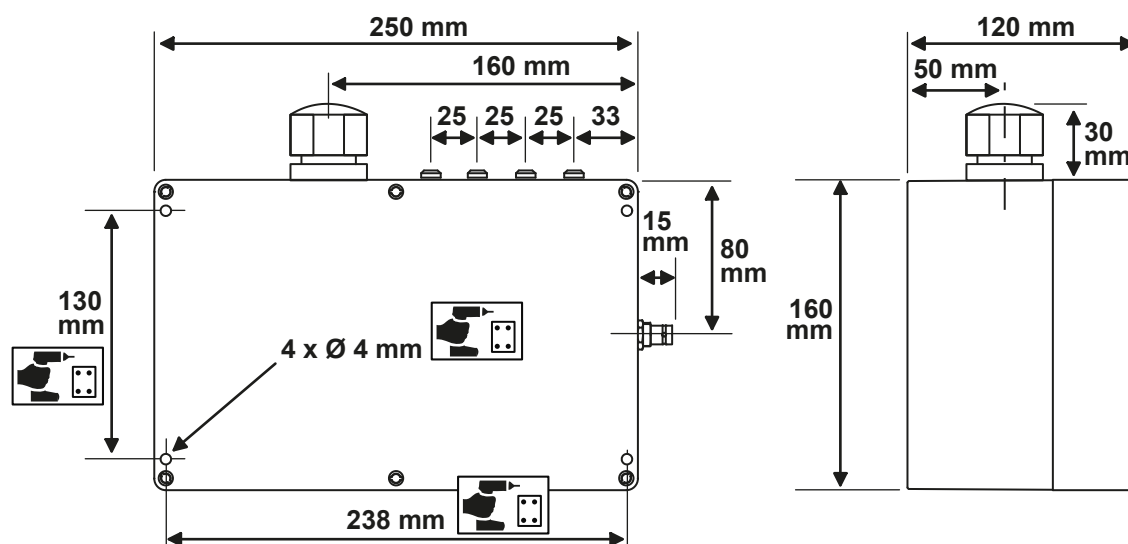
8- Selection guide, references for ordering

8.1 Standard unit selection guide (transmitter + receiver)

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

Housing	Transmitter button configurations		URR RECEIVER — 6 relays	UCR RECEIVERS — 12 relays With dedicated second speed relay	UCR RECEIVERS — 12 relais With common second speed relay	UDR RECEIVERS — 12 relays	UDR RECEIVERS — 18 relays
URE	2C	2 two-step pushbuttons	UR1R14XY1				
URE	11	4 one-step pushbuttons	UR2R14XY1				
URE	22	4 two-step pushbuttons	UR3R14XY1				
UDE 6 buttons		6 one-step pushbuttons	UD1R14XYZ			UD1D29XYZ	
UDE 6 buttons		6 two-step pushbuttons		UD2C140CZ	UD2C240YZ	UD2D2WXYZ	
UDE 8 buttons		8 two-step pushbuttons			UD3C240YZ	UD3D2WXYZ	
UDE 8 buttons		6 two-step pushbuttons + 1 one-step pushbutton + 1 electronic switch with 3 positions			UD4C240YZ	UD4D2WXYZ	
UDE 10 buttons		10 one-step pushbuttons			UD5C240YZ		UD5D3WXYZ
UDE 10 buttons		10 two-step pushbuttons					UD6D3WXYZ
UDE 10 buttons		6 two-step pushbuttons + 2 one-step pushbuttons + 2 electronic switches with 3 positions					UD7D3WXYZ

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
- 1 installation guide and Quick Start
- With «start-up by IR validation» function and 2 IR modules ref: UDF1 (x2) supplied

8.2 Optional elements for standard unit selection guide

URE OR UD REPLACEMENT TRANSMITTER
(optionnal transmitter, supplied without battery, without electronic key)

URE**V**2C0-B

URE**V**110-B

URE**V**220-B

UDE**V**11100

UDE**V**22200

UDE**V**22220

UDE**V**222D0

UDE**V**11111

UDE**V**22222

UDE**V**22217

Descriptions for letters **V**, **W**, **X**, **Y** and **Z**

	URR RECEIVER	UCR RECEIVERS		UDR RECEIVERS
	6 relays	12 relays with dedicated second speed relay	12 relays with common second speed relay	12 ou 18 relays
W = 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)
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 function + 3 IR UDF1 supplied
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	**A** = 12-24 Vdc **B** = 24-48 Vac **D** = 115-230 Vac

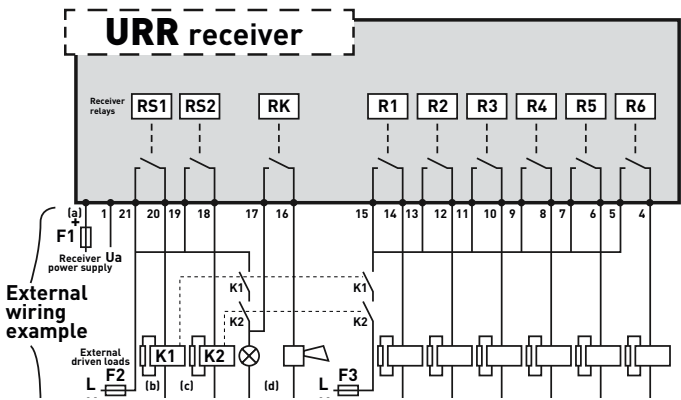|	TRANSMITTER URE	TRANSMITTER UDE
Z = Battery and battery charging accessory	**1** = UCCU adapter + URCi-B support	**2** = 2 UWB fast charge batteries + UCCU charger + UDC1 support **3** = 2 UWB fast charge batteries + UCC1 voltage adapter **4** = 2 UDB2 standard batteries + UBCU charger + UDC1 support **5** = 2 UDB2 standard batteries + UBC1 connector
V = Frequency band and «Star-up by IR validation» function	**2** = 433 MHz no IR **3** = 433 MHz with start-up by IR validation	**4** = 433 MHz no IR **5** = 433 MHz with start-up by IR validation **R** = 915 MHz no IR **T** = 915 MHz with start-up by IR validation **M** = 869 MHz no IR **P** = 869 MHz with start-up by IR validation

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

External wiring example

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, rotating/flashing light, etc...)

Unit réf: UR1R14••1

Transmitter with 2 two-step pushbuttons

Unit réf: UR2R14••1

Transmitter with 4 one-step pushbuttons

Unit réf: UR3R14••1

Transmitter with 4 two-step pushbuttons

		ACTIVATED relay of the URR receiver						
		RK	R1	R2	R3	R4	R5	R6
	Green button «On/Horn»	X						
OPERATED button of the URE transmitter	B1 1st step		X					
	B1 2nd step		X		X			
	B2 1st step			X				
	B2 2nd step			X	X			
	B3 1st step					X		
	B3 2nd step					X		X
	B4 1st step						X	
	B4 2nd step						X	X

Unit ref.: UD1R14•••

Transmitter with 6 one-step pushbuttons

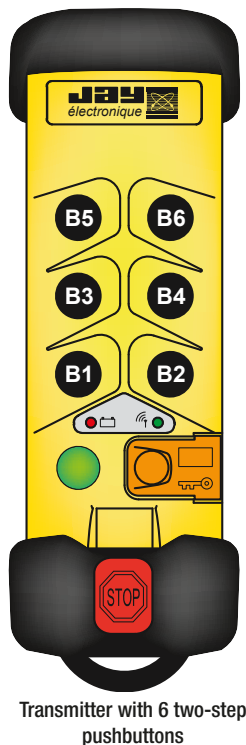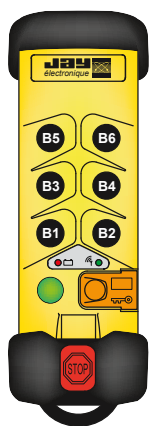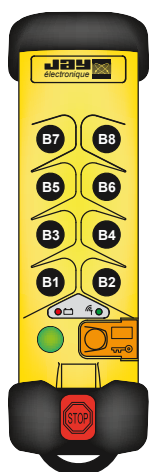|		ACTIVATED relay of the URR receiver						
		RK	R1	R2	R3	R4	R5	R6
	Green button «On/Horn»	X						
OPERATED button of the UDE transmitter	B1		X					
	B2			X				
	B3				X			
	B4					X		
	B5						X	
	B6							X

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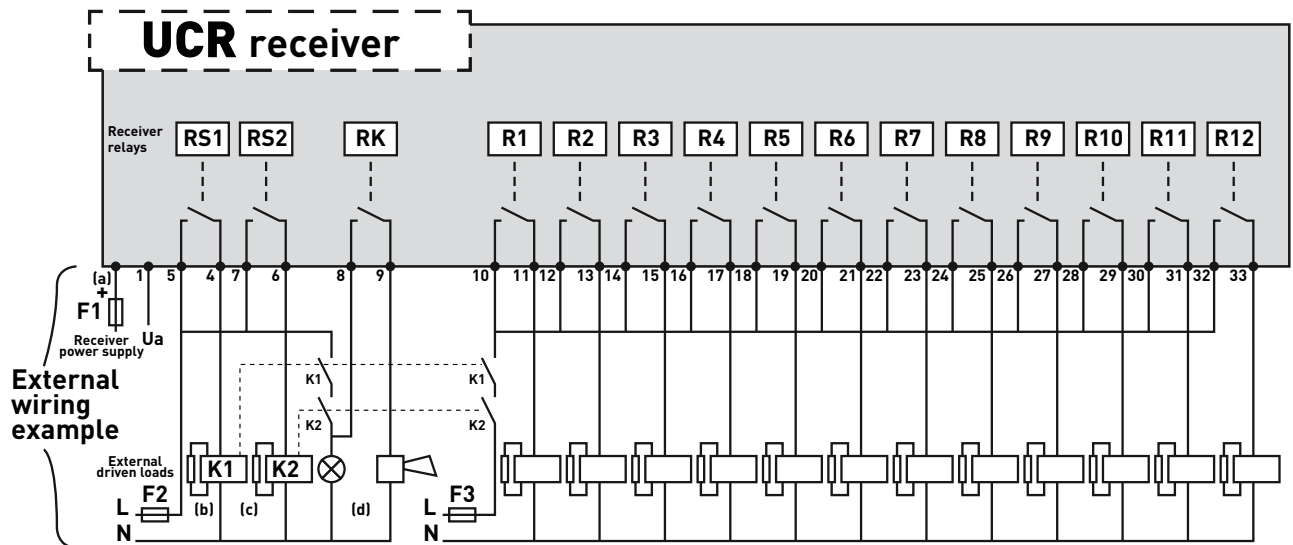
(a)= The power supply connection depends on the type of receiver and the power supply required:

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, rotating/flashing light, etc...)

Unit ref.: UD2C140C•

Transmitter with 6 two-step pushbuttons

			ACTIVATED relay of the UCR receiver (with dedicated second speed relay)													
OPERATED button of the UDE transmitter			RK	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12
	Green button «On/Horn»		X												
	B1	1st step		X											
		2nd step		X	X										
	B2	1st step				X									
		2nd step				X	X								
	B3	1st step						X							
		2nd step						X	X						
	B4	1st step								X					
		2nd step								X	X				
	B5	1st step										X			
		2nd step										X	X		
	B6	1st step												X	
		2nd step												X	X

Units ref.: UD2C240•• and UD3C240••

OPERATED button of the UDE transmitter		ACTIVATED relay of the UCR receiver (with common second speed relay)												
		RK	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12
Green button «On/Horn»		X												
B1	1st step		X											
B1	2nd step		X		X									
B2	1st step			X										
B2	2nd step			X	X									
B3	1st step					X								
B3	2nd step					X	X							
B4	1st step						X							
B4	2nd step						X	X						
B5	1st step								X					
B5	2nd step								X		X			
B6	1st step									X				
B6	2nd step									X	X			
B7	1st step											X		
B7	2nd step											X		X
B8	1st step												X	
B8	2nd step											X	X	

UD2C240••
Transmitter with 6 two-step pushbuttons

UD3C240••
Transmitter with 8 two-step pushbuttons

Unit ref.: UD5C240••

OPERATED button of the transmitter UDE	ACTIVATED relay of the receiver UCR												
	RK	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12
Green button «On/Horn»	X												
B1		X											
B2			X										
B3				X									
B4					X								
B5						X							
B6							X						
B7								X					
B8									X				
B9										X			
B10											X		

Transmitter with 10 one-step pushbuttons

OPERATED button of the UDE transmitter		ACTIVATED relay of the UCR receiver												
		RK	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12
Green button «On/Horn»		X												
B1	1st step		X											
B1	2nd step		X		X									
B2	1st step			X										
B2	2nd step		X	X										
B3	1st step					X								
B3	2nd step					X		X						
B4	1st step						X							
B4	2nd step						X	X						
B5	1st step								X					
B5	2nd step								X		X			
B6	1st step									X				
B6	2nd step									X	X			
B7												X		
B8 (position 1)													X	
B8 (position 2)														X
B8 (position 3)													X	X

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

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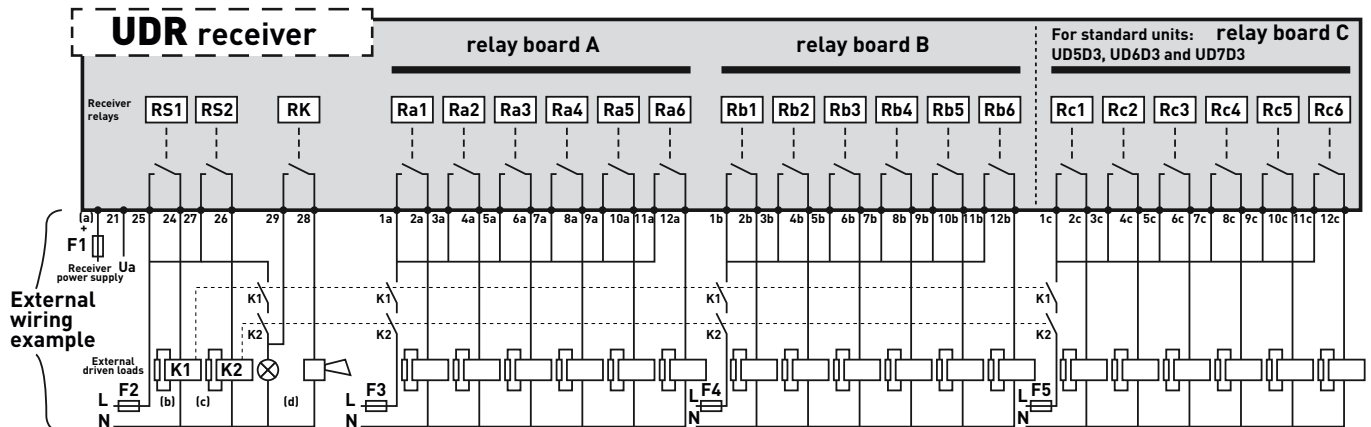
(a)= The power supply connection depends on the type of receiver and the power supply required:
   terminals 23 - 21 for power supplies 12 Vdc, 24 Vac or 115 Vac
   terminals 22 - 21 for power supplies 24 Vdc, 48 Vac or 230 Vac

(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

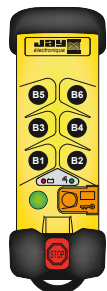(d)= Elements which indicate start of remote controlled machines (ex.: horn, rotating/flashing light, etc...)

	ACTIVATED relay of the UDR receiver												
OPERATED button of the UDE transmitter	RK	Ra1	Ra2	Ra3	Ra4	Ra5	Ra6	Rb1	Rb2	Rb3	Rb4	Rb5	Rb6
Green button «On/Horn»	X												
B1 — 1st step		X											
B1 — 2nd step		X		X									
B2 — 1st step			X										
B2 — 2nd step			X	X									
B3 — 1st step					X								
B3 — 2nd step					X		X						
B4 — 1st step						X							
B4 — 2nd step						X	X						
B5 — 1st step								X					
B5 — 2nd step								X		X			
B6 — 1st step									X				
B6 — 2nd step									X	X			
B7											X		
B8 (position 1)												X	
B8 (position 2)													X
B8 (position 3)												X	X

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

UD2D2••••
Transmitter with 6 two-step pushbuttons
Receiver with 12 relays

UD3D2••••
Transmitter with 8 two-step pushbuttons
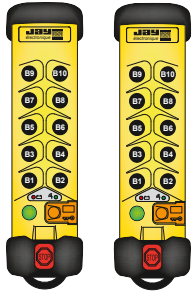Receiver with 12 relays
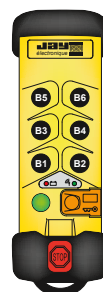
UD1D29••••
Transmitter with 6 one-step pushbuttons
Receiver with 12 relays

	ACTIVATED relay of the UDR receiver (with common second speed relay)												
OPERATED button of the UDE transmitter	RK	Ra1	Ra2	Ra3	Ra4	Ra5	Ra6	Rb1	Rb2	Rb3	Rb4	Rb5	Rb6
Green button «On/Horn»	X												
B1 — 1st step		X											
B1 — 2nd step		X		X									
B2 — 1st step			X										
B2 — 2nd step			X	X									
B3 — 1st step					X								
B3 — 2nd step					X		X						
B4 — 1st step						X							
B4 — 2nd step						X	X						
B5 — 1st step								X					
B5 — 2nd step								X		X			
B6 — 1st step									X				
B6 — 2nd step									X	X			
B7 — 1st step											X		
B7 — 2nd step											X		X
B8 — 1st step											X		
B8 — 2nd step											X	X	

Units ref.: UD6D3••• and UD5D3••••

UD6D3••• — Transmitter with 10 two-step pushbuttons / Receiver with 18 relays

UD5D3•••• — Transmitter with 10 one-step pushbuttons / Receiver with 18 relays

OPERATED button of the UDE transmitter		ACTIVATED relay of the UDR receiver (with common second speed relay)															
		RK	Ra1	Ra2	Ra3	Ra4	Ra5	Ra6	Rb1	Rb2	Rb3	Rb4	Rb5	Rb6	Rc1	Rc2	Rc3
Green button «On/Horn»		X															
B1	1st step		X														
B1	2nd step		X		X												
B2	1st step			X													
B2	2nd step			X	X												
B3	1st step					X											
B3	2nd step					X		X									
B4	1st step						X										
B4	2nd step						X	X									
B5	1st step								X								
B5	2nd step								X		X						
B6	1st step									X							
B6	2nd step									X	X						
B7	1st step											X					
B7	2nd step											X		X			
B8	1st step												X				
B8	2nd step												X	X			
B9	1st step														X		
B9	2nd step														X		X
B10	1st step															X	
B10	2nd step															X	X

Unit ref.: UD7D3••••

OPERATED button of the UDE transmitter		ACTIVATED relay of the UDR receiver (with common second speed relay)																		
		RK	Ra1	Ra2	Ra3	Ra4	Ra5	Ra6	Rb1	Rb2	Rb3	Rb4	Rb5	Rb6	Rc1	Rc2	Rc3	Rc4	Rc5	Rc6
Green button «On/Horn»		X																		
B1	1st step		X																	
B1	2nd step		X		X															
B2	1st step			X																
B2	2nd step			X	X															
B3	1st step					X														
B3	2nd step					X		X												
B4	1st step						X													
B4	2nd step						X	X												
B5	1st step								X											
B5	2nd step								X		X									
B6	1st step									X										
B6	2nd step									X	X									
B7												X								
B8													X							
B9	(position 1)														X					
B9	(position 2)															X				
B9	(position 3)														X	X				
B10	(position 1)																X			
B10	(position 2)																	X		
B10	(position 3)																X	X		

Transmitter with 6 two-step pushbuttons + 2 one-step pushbuttons + 2 rotary switches with 3 fixed positions

8.4 Selection guide for separate elements

8.4.1 URE Transmitter

Reference:

U R E ☐ ☐ 0 - B

Type of communication and version:

2 = radio, 433-434 MHz bands
3 = radio, 433-434 MHz bands+ «start-up by IR validation» function

Type of function buttons on first row (starting from bottom of transmitter):

See «Table of possible button types by row», below
Choice 1 ou 2 is necessary for the first row.

Type of function buttons on second row:

See «Table of possible button types by row», below

Table of possible button types by row

2nd row
1st row

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

(1) = not possible on 1st row

Reference example:

URE2150-B

Transmitter URE version B (UD range)
- Battery integrated
- 433MHz
- Without electronic key
- Row 1 = BPSV-BPSV (1)
- Row 2 = COM2-COM2 (5)
- Kit 90 labels buttons black & white (UWE207)
- 6 label kit arrows color (UWE202)

8.4.2 UDE transmitter

Reference:

U D E ☐ ☐ ☐ ☐ ☐ ☐

Type of communication and version:

4 = radio, 433-434 MHz bands
5 = radio, 433-434 MHz bands + «start-up by IR validation» function
M = radio, 869 MHz band
P = radio, 869 MHz band + «start-up by IR validation» function
R = radio, 911-918 Mhz bands
T = radio, 911-918 Mhz bands + «start-up by IR validation» function

Type of function buttons on first row (starting from bottom of transmitter):

See «Table of possible button types by row», below

Type de boutons de fonction sur la seconde rangée:

See «Table of possible button types by row», below

Type of function buttons on second row:

See «Table of possible button types by row», below

Type of function buttons on fourth row:

If 6+2 button version = 0
If 8+2 button version or 10+2 button version = see «Table of possible button types by row», below

Type of function buttons on fifth row:

If 6+2 button version or 8+2 button version = 0
If 10+2 button version = see «Table of possible button types by row», below

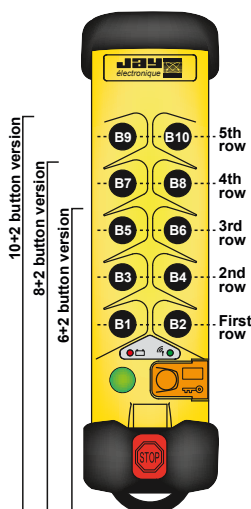**Table of possible button types by row**

	Left button	Right button	Description of button types	
1 =	BPSV	BPSV	BPSV = Single speed pushbutton (one-step)	1
2 =	BPDV	BPDV		
3 (1) =	BPSV	COM2	BPDV = Double speed pushbutton (two-step)	1>2
4 (1) =	BPSV	COM3		
5 (1) =	COM2	COM2	COM2 = Rotary switch with 2 fixed positions	
6 (1) =	COM2	COM3		
7 (1) =	COM3	COM3	COM3 = Rotary switch with 3 fixed positions	
8 (1) =	BPSV	COM3R		
9 (1) =	COM2	COM3R	COM3R = Rotary switch with 3 positions with automatic return to center	
A (1) =	COM3	COM3R		
B =	COM3R	COM3R		
D (a) (1) =	BPSV	BPTR	BPTR = Bouton Poussoir Trois Impulstions / 3 sélections	1

(a) = only in B8 for UDE 8 function buttons
(1) = not possible on 1st row

Reference Example:

UDE413600

Transmitter UDE (UD range)
- 433MHz
- Without electronic key nor battery
- Row 1 = BPSV-BPSV (1)
- Row 2 = BPSV-COM2 (3)
- Row 3 = COM2-COM3 (6)
- Kit 90 labels buttons black & white (UWE207)
- 6 label kit arrows color (UWE202)

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

Reference:

| U | R | W | E | 2 | 1 | - | B | + | 1xxxxx | Key number picture (1) |

| xxxx | Receiver id picture (3) |

Electronic key for UDE transmitter

Reference:

| U | D | W | E | 2 | 3 | + | 4xxxxx | Key number picture (2) |

| xxxx | Receiver id picture (3) |

Receiver label
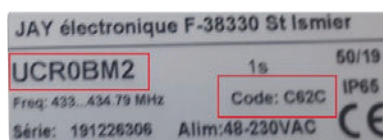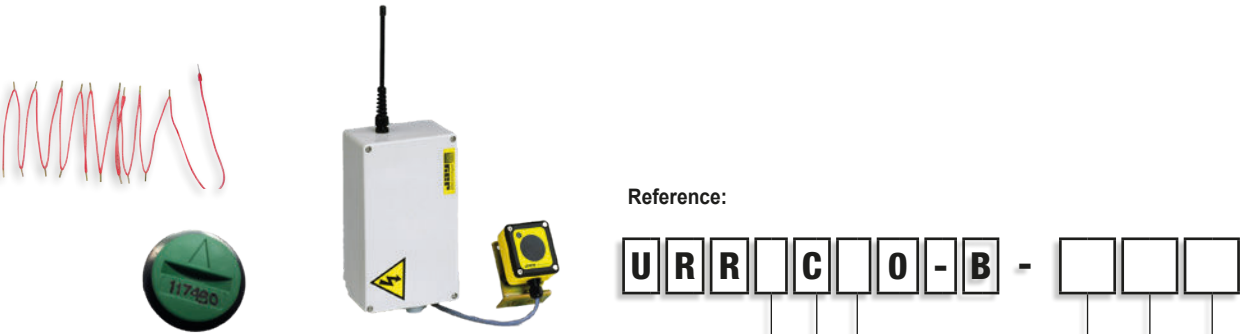
JAY électronique F-38330 St Ismier
UCR0BM2   1s   50/19
Freq: 433...434.79 MHz   Code: C62C   IP65
Série: 191226306   Alim:48-230VAC   CE   (3)

8.4.4 URR receiver

Reference:

U R R ☐ C ☐ 0 - B - ☐ ☐ ☐

Type of communication and version:

0 = radio, 433-434 MHz bands
1 = radio, 433-434 MHz bands+ «start-up by IR validation» function (1)

Number of outputs:

Always 6 relays

Power supply:

4 = 12 - 24 Vdc
A = 24 - 48 Vac
B = 115 - 230 Vac

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

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/OFF/2

(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

Reference:

| U | D | R | | | | 0 | | - | | | |

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/OFF/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.

(2) = 2 safety relays + 1 «On/Horn» relay

Reference example:

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/OFF/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	
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	
URCi-B	Charger	
UBC1	Power supply / battery connector (10 to 30 Vdc max.) (for standard plug-in battery UDB2)	
UCC1	Voltage adapter 12-24 Vdc (vehicle socket) / 5 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)	
UDWE23	Programmed electronic key for UDE transmitter (please let us know key number)	
OWE20	Neck strap	
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)	

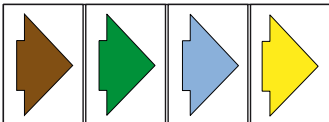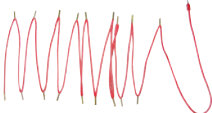## 8.5.2 Selection guide for receiver accessories

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	approximate length : (A) = 320 mm ; (B) = 190 mm Required drill hole Ø15 mm
Through insulated remote antenna, 1/2 wave, with 5 m BNC cable	VUA105AH	VUA105BH	
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	approximate length : (A) = 440 mm ; (B) = 320 mm
Insulated and magnetic remote antenna, 1/2 wave, with 5 m BNC cable	VUA105AM	VUA105BM	
Through uninsulated remote antenna, 1/4 wave, with 3 m BNC cable	VUA103AV	VUA103BV	(antenna to be mounted on a not grounded metal surface) approximate length : (A) = 180 mm ; (B) = 100 mm Required drill hole Ø12 mm or Ø19 mm (according to the type of mounting)
Through uninsulated remote antenna, 1/4 wave, with 5 m BNC cable	VUA105AV	VUA105BV	

(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)	
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	
UDWR38	Fastening Kit for receivers by 4 magnetic contacts	
UDWR13	2 m cable + 24-pin male connector	
UDWR14	2 m cable + 16-pin male connector	

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