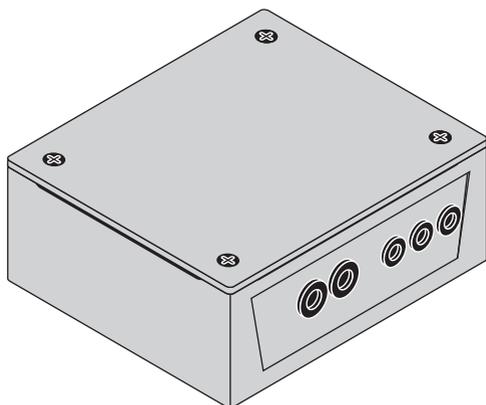# ERONE - RICEVITORE 4 CH 433/868
ERONE - 4 CH RECEIVER 433/868
ERONE - RECEPTEUR 4 CANAUX 433/868
ERONE - 4 KANAL EMPFANGER 433/868

SEL2641R433C4, SEL2641R433V4 SEL2681R868V4
SEL2641F433C4, SEL2641F433V4, SEL2681R868V4

CE

Misure di sicurezza

Per un perfetto funzionamento dell'apparecchio, si prega di leggere interamente questo manuale e seguire attentamente le indicazioni ivi descritte, in quanto l'uso improprio può danneggiare l'apparecchio

Security measures

For a perfect functioning of the device, read carefully this manual and follow all the indications, since an inadeguate use can make damages to the device

Mesures de sécurité

Pour un fonctionnement parfait de l'appareil, vous devez lire complétement les instructions de installation et suivre estrictement les indications décrites, puisque un maniement inadéquat peut produire dommage à l'appareil.

Sicherheitsmaßnahmen

Um ein einwanfreies Functionieren des Apparates zu erhalten, sollten Sie die in der Bedienungsanleitung enthaltene Anweisungen zur Bedienung und zur Installation genau durchlesen und befolgen, da eine Nichtbeachtung derselben starke Schäden am Apparat hervorrufen kann.

Dichiarazione di Conformità:

Il costruttore Elpro Innotek Spa dichiara che il radioprogrammatore mod. SEL2641R433-P4, SEL39R433-P4, SEL39R30-P4 è conforme alle Direttive Europee 73/23/CEE, 89/336/CEE e 99/05/CE.

Declaration of Conformity:

Elpro Innotek Spa as manufacturer declares that the following appliances SEL2641R433-P4, SEL39R433-P4, SEL39R30-P4 fullfil the requirements of the European Directives 73/23/CEE, 89/336/CEE and 99/05/CE.

Déclaration de Conformité:

Elpro Innotek Spa déclare que les appareils SEL2641R433-P4, SEL39R433-P4, SEL39R30-P4 sont conformes aux exigences essentielles et autres dispositions des Directives 73/23/CEE, 89/336/CEE e 99/05/CE.

Declaration of Conformity:

Der Funkmotorsteuerung (typ SEL2641R433-P4, SEL39R433-P4, SEL39R30-P4) entspricht den europäischen Normen 89/336/CEE 73/23/CEE, 99/05/CE, EG Konformitätsbescheinigung.

Presentazione / Introduction / Introduction / Allgemein

4 viti per fissaggio del coperchio
4 screws for cover fixing
4 vis capot
4 Schraube

Coperchio
Cover
Couvercle
Deckel

4 Viti per fissaggio della scatola
4 screws for box fixing
4 vis de fixation
Schraube

Passacavi
Wire leads
Passes-fils
Kabelführung

4 tasselli
4 plugs
4 chevilles
4 Einsatz

Antenna
Aerial
Fil d'antenne
Antenne

Scatola con ricevitore e coperchio di protezione in plexiglass
Receiver box with plexiglas cover
Boîtier avec récepteur et plexiglas de protection
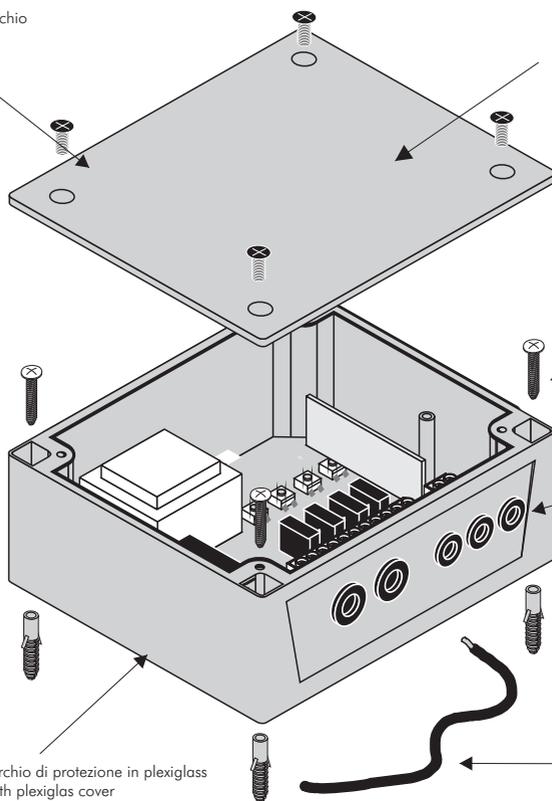Behälter mit Funkmotorsteuerung

Fig. 1

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Dimensioni d'ingombro / Overall dimensions
Dimensions d'encombrement / Abmessung

52

115

140
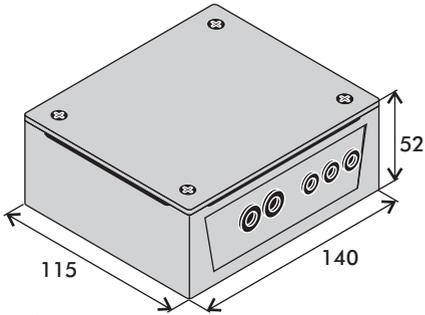
Fig. 2

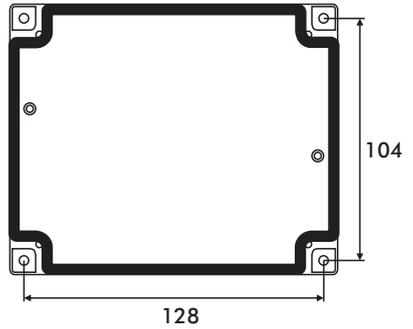Interassi / Drilling distances
Distances de perçage / Spurweiten

104

128

Fig. 3

Layout

Trasformatore di alimentazione
Transformer
Transformateur
Trasformator

LED

Pulsanti, Push-buttons,
Touches, Tasten

Boutons

Modulo radio, RF Card,
Fiche radio,
Steckerempfänger

Fusibile F1 : 3,15A - 250V
Fuse F1 : 3,15A - 250V
Fusible F1 : 3,15A - 250V
Sicherung F1 : 3,15A - 250V

DL1 DL2 DL3 DL4
P1   P2   P3   P4

1 2   3 4 5 6 7 8 9 10 11 12 13 14   15 16
N L   0 12 24
        - AC +   RL1 RL2 RL3 RL4

Relais

Buzzer

Morsettiere di I/O
Terminal boards
Bornes
Anschlüsse
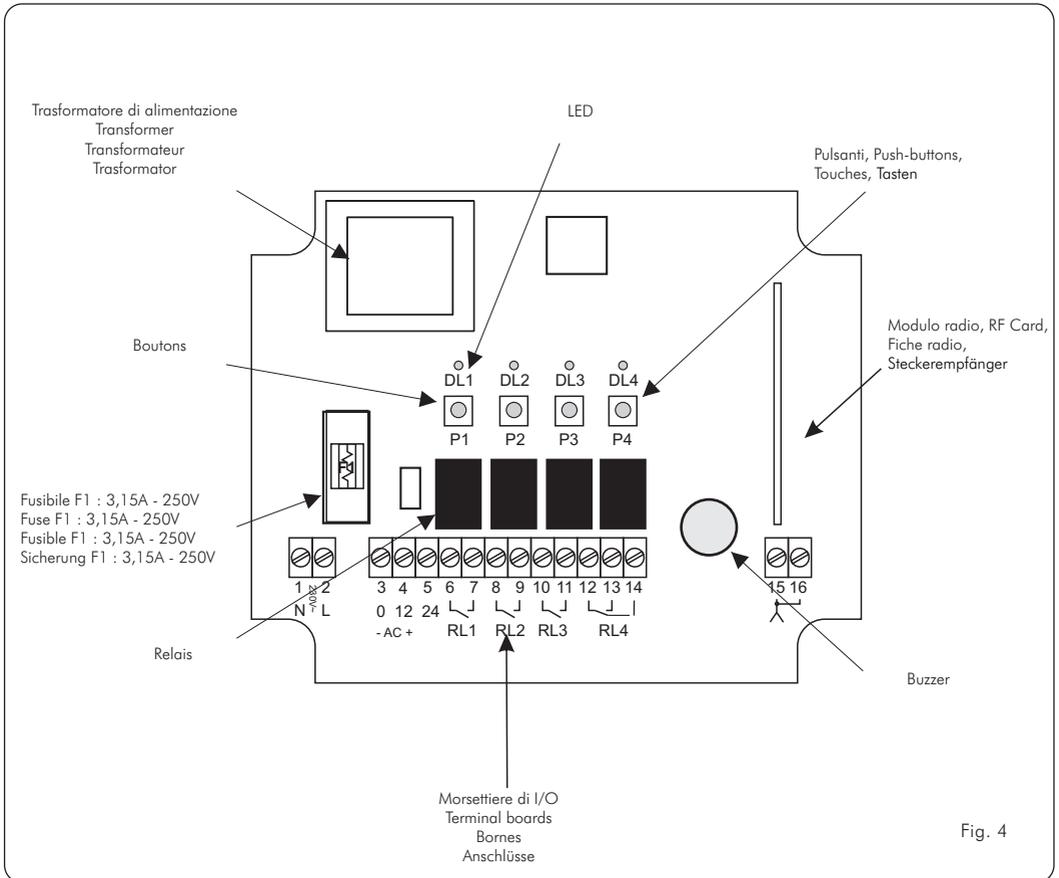
Fig. 4

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1 - INTRODUCTION

ERONE 433 mod. SEL2641 Rxx X4 is a supeheterodyne receiver of the series ERONE 433/ 868. It has been designed for the control of automatic closing systems and anti-burglar systems, thanks to its very high security coding system (KeeLoq ® Hopping code).

The operating frequency is among the European harmonised frequencies; the product fully complies with the EMC European Regulations (CE) The code sent by the transmitter changes at every activation, avoiding any scanning and copying risk.

A special algorithm allows to keep synchronysed transmitter and receiver.

The receiver which makes the activation, once received the transmitter code, has to be connected during the installation to the device to control (gate, garage door, rolling shutters, awnings, anti-burglar appliances, lighting, etc.).

The receiver has 4 output relays, 3 with NO (Normally open) and one with NO/NC (Normally open and normally closed) contacts.

It can be connected to any type of appliance as gates, garage doors, rolling shutters, lighting, etc.)

The user codes can be memorised both with the receiver buttons and, via radio, in self-learning, using the transmitter keys.

All the receivers of Erone 433/868 Series can manage the serial number and the sinchronisation algorithm of many transmitters.

Types

Erone 433 - SEL 2641 R433 C4:   4 Channels receiver with 12 / 24 Vac/dc power supply
Erone 433 - SEL 2641 R433 V4: 4 Channels receiver with 230 Vac power supply

Erone 433 - SEL 2641 F433 C4: 4 Channels receiver FM with 12 / 24 Vac/dc power supply
Erone 433 - SEL 2641 F433 V4: 4 Channels receiver FM with 230 Vac power supply

Erone 868 - SEL 2681 R868 C4: 4 Channels receiver 868 AM with 12 / 24 Vac/dc power supply
Erone 868 - SEL 2681 R868 V4: 4 Channels receiver 868 AM with 230 Vac power supply

Usable transmitters

	Erone 024A Mod. S2TR 2641 E2 :	2 channels transmitter;
ASK Version	Erone 024A Mod. S2TR 2641 E4 :	4 channels transmitter;
	Erone 024A Mod. S2TR 2641 E2M :	2 channels Master transmitter.
	Erone 024F Mod. S2TR 2641 F2 :	2 channels transmitter;
FSK Version	Erone 024F Mod. S2TR 2641 F4 :	4 channels transmitter;
	Erone 024F Mod. S2TR 2641 F2M :	2 channels Master transmitter.
Erone	028A Mod. S2TR 2681 E2 :	2 channels transmitter;
	Erone 028A Mod. S2TR 2681E4 :	4 channels transmitter;
	Erone 028A Mod. S2TR 2681 E2M :	2 channels Master transmitter.

2 - TECHNICAL SPECIFICATIONS

	Types	
Characteristics	**SEL 2641R433V4** **SEL 2641F433V4**	**SEL 2641R433C4** **SEL2641F433C4**
Receiver type:	Superheterodyne	Superheterodyne
Carrier frequency:	433.92 MHz	433.92MHz
Local oscillator frequency:	433.42 MHz	433.42MHz
Demodulation:	AM/ASK	AM/ASK
Input load:	50 Ohm	50 Ohm
Channel width:	> 25 KHz	> 25 KHz
Intermediate frequency:	500 KHz	500 KHz
Input sensitivity:	-107 dBm	-107 dBm
Local oscillation emissions:	< -57 dBm	< -57 dBm
Power supply:	230 Vac	12/24 Vac/dc
Output relays:	4	4
Outputs :	3NO +1NO/NC	3NO +1NO/NC
Max power commutable:	24 VA	24 VA
Consumption (4relays at rest/excited)	11/ 18.5 mA	56/ 118 mA @24Vac
Memory capacity:	255 user codes	255 used codes
Operating temperature:	-20°/+60°C	-20°/+60°C
Housing protection:	Ip44	IP44
Weight:	380 gr.	280 gr.
Overall dimensions:	140 x 115 x 52 mm	140 x 115 x 52 mm

Tab.1

3 - MAIN FEATURES

- Selflearning and cancelling of the transmitter codes without accessing to the receiver;
- 255 transmitter keys storable;
- Stored transmitter number display;
- Display of the last received transmitter code;
- Replacement of a stored code;
- Total memory erasure;
- Relay operating mode programmable: pulse, step , delayed, with reduced range;
- Programmable relay release time from 1 sec. to 17 hours;
- Reduced range mode programmable for each relay.

4 - INSTALLATION

The appliance has been designed in full compliance with the European Directives 89/336/CEE, 73/23/CEE and according to the specifications of the Regulation EN 60335-1.

4.1-Positioning

The location choice is very important for the best result of the installation.
The following conditions have to be followed:
 - Fix the receiver far from interference sources as informatic systems, allarm systems or other radio emissions.
 - the distance between 2 receivers should be more than 1.5 m.

4.2-Fixing

Remove the cover of the receiver; fix the box in each corner by using the screws and the plugs supplied.

Connections

1 - Power supply (fig.5)

⚠️ **ATTENTION:** The connections differ upon the type.

Mod. SEL 2641 R433 V4

Connect the Mains 230 Vac to the following terminals (fig. 4):

terminal 1 = Neutral (230 Vac)
terminal 2 = Phase (230 Vac)

⚠️ **ATTENTION :**
Connect the appliance to the building electric plant throught a magnetothermic switch with minimum contact distance of 3 mm.
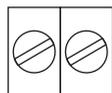
Mod. SEL 2641 R433 C4

Connect the power supply 12/24 Vac/dc to the terminals 3,4,5.
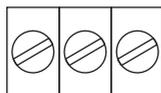
terminal 3 = 0
terminal 4 = +12 Vac/dc
terminal 5 = +24 Vac/dc

| 1 | 2 | | 3 | 4 | 6 |
| N | L | | 0 | 12 | 24 |

SEL 2641 R433 V4   SEL 2641 R433 C4

Fig. 5

2 - Fuse (fig. 6)

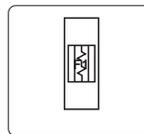The fuse F1 of 315 mA it is used for the electronic card protection.

Fig. 6

3 - Relay outputs (fig. 7)

terminal 6 = C relay1
terminal 7 = NA relay1
terminal 8 = C relay 2
terminal 9 = NA relay2
terminal 10 = C relay 3
terminal 11 = NA relay 3
terminal 12 = C relay 4
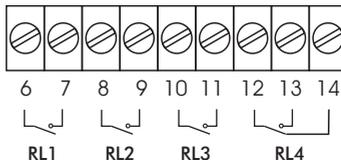terminal 13 = NA relay4
terminal 14 = NC relay4

6 7   8 9 10 11 12 13 14

RL1   RL2   RL3   RL4

Fig. 7

4 - Antenna (fig. 8)

- if you connect an antenna (not provided) fix the net to the terminal 15 and the shield to the terminal 16; if you use a piece of net (16,5 cm) connect it to the terminal 15.
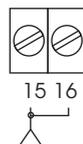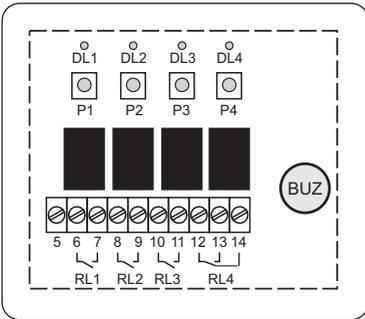

15 16

Figura 8

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DL1(Red Led):   Displays the Pulse mode (of the selected relay);
DL2(Green Led):   Displays the Step mode (of the selected relay);
Dl3(Red Led):   Displays the Timered mode (of the selected relay);
DL4(Red Led):   Displays the operating mode in Reduced range (of the selected relay);

P1, P2, P3, P4:   Push buttons needed for the transmitters memorising and for the relay operating mode setting;
BUZ : Signalling buzzer : sounds 4 different "beep" depending upon the relay: "Beep1","Beep2","Beep3","Beep4";

RL1, RL2, RL3 : Normally Open contacts relays (NO);

Fig. 9

6 - TRANSMITTER CODE MEMORISATION

6A) : Transmitter memorising using P1, P2, P3, P4 buttons.

The memorization develops in 2 phases
1): Memorization of the keys transmitters into the memory with association key-relay;
2): Relay operating mode configuration .

The receiver is predisposed for an pulse operation mode of the relay;
The change of the operation mode effects subsequently, as explained in the chapter 8 of the present manual

Relay RL1
Keep P1 pressed down for 4 sec. - DL1 remains lit - The buzzer sounds the bip type "Beep1"- Before the end of the beep , press the key A or B or C or D of the transmitter. - DL1 turns off - Press again the key A or B or C or D to confirm and verify the activation of RL1 and the lighting of DL1.

Press P1 for 4 sec , the led DL1 remains lit; the buzzer sounds "Beep1"

Bip1

Press the key A, B, C or D of the transmitter

DL1 turns off

Press again the key A, B, C or D of the tx to check
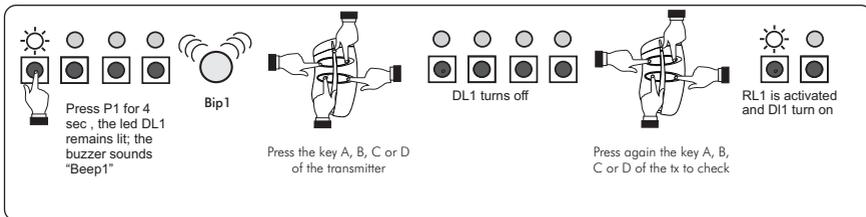
RL1 is activated and Dl1 turn on

Fig. 10

Memorisation the transmitter into the relays RL2, RL3, RL4
The procedure is similar to that used for RL1, using the buttons P2, P3 or P4 instead of P1.

NOTE2 : In case of memorisation of many transmitter keys , keep pressed the key of the receiver related to the relay and press in sequence the keys of the transmitters to memorise.

6B) : Memorisation of transmitters without accessing to the receiver

The memorization effects using only the transmitter keys
There are 2 cases:
1) the receiver is virgin and you need to memorise the first transmitter;
2) in the receiver it is already present in memory a transmitter and you have to memorise the following transmitters.
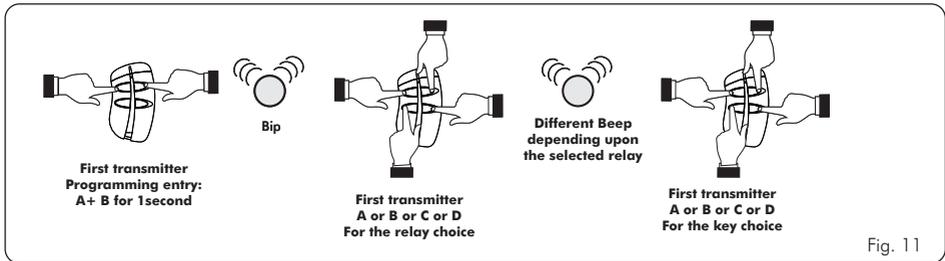
First transmitter memorisation
1 - Keep pressed down the keys A+B simultaneously until the buzzer sounds a Beep and the 4 leds remain lit,
2 - Choose the relay to activate pressing the button of the transmitter according the following table:

|	
Key A ---> Relay RL1 activation	Key B ---> Relay RL2 activation
Key C ---> Relay RL3 activation	Key D ---> Relay RL4 activation

Tab.2

Keep the transmitter key pressed down until the buzzer sounds a beep. The buzzer sounds different beeps depending upon the selected relay.

3 - Activate the transmitter key which has to be memorised (A, B, C or D) before the end of the beep
4 - Check the selected relay activation and the corresponding led lighting.

Bip

First transmitter
Programming entry:
A+ B for 1second

First transmitter
A or B or C or D
For the relay choice

Different Beep
depending upon
the selected relay

First transmitter
A or B or C or D
For the key choice

Fig. 11

Next transmitters memorisation
1 - Press down for 1 second the buttons A + B simultaneously of a transmitter already present in the memory, until the buzzer sounds a beep;
2 - Select the relay to activate pressing down the key always of the above transmitter according Tab.1
 The buzzer will sound a different beep depending upon the selected relay.
3 - Press down the transmitter key to memorise (A or B or C or D)
4 - Check the relay activation and the corresponding led lighting.

Bip

Transmitter already
memorised .
Programming entry
A + B for 1 second

Transmitter already memorised
A or B or C or D for the relay
choice

Different Beep
depending
upon the
selected relay

New transmitter :
A or B or Different Beep
depending upon the

Fig. 12
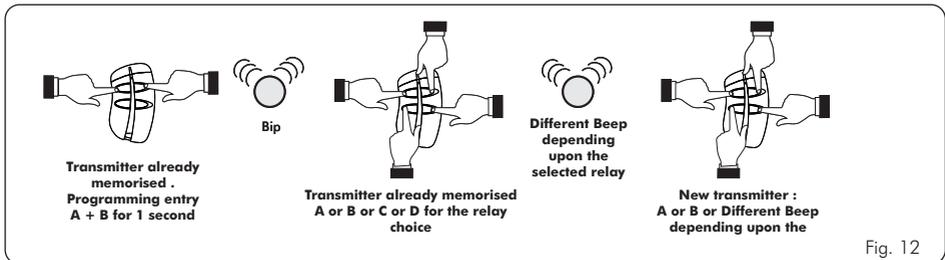
7C) - Memory full

The memory has a 256 transmitter keys capacity.
If you try to memorise the 256th, through the procedures 7A or 7B, a simultaneous flash of the 4 leds occurs.

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The relays can be programmed in 3 different modes: Impulsive (pre-planned), Bistabile (or step), Delayed. For each of these possibilities it is possible besides to plan the range reduction function that decreases the sensitivity of the receiver, preventing the receipt from great distance.

The configuration of each relay is displayed by the lighting of the corresponding led:
- DL1 points out that the relay is planned in impulsive mode;
- DL2 points out that the relay is planned in bistabile mode ;
- DL3 points out that the relay is planned in delayed mode;
- Besides DL4 points out that for the relay the range reduction has been activated.

While for the first 3 the three functions are in exclusive, the range reduction is an additional functionality.

7A) Relay operating mode display

Procedure:

Keep pressed down, for 4 seconds, the receiver button corresponding to the selected relay, up to the acoustic signal; subsequently press for an instant P4, within 2 sec.; then still P4 and check the lighting of the leds.

Example : RL1 relay operating mode display

Press for 4 sec. the button P1, for an instant P4, then still P4: the lighting of the leds gives the operating mode set for RL1.

Fig. 13

7B) Change of the relays operating mode

Procedure:

Keep pressed down for 4 sec. the button corresponding to the selected relay up to the acoustic signal; the corresponding led will light ; within 2 sec. press the button P1 and subsequently press the button (P1, P2 or P3) according to the new configuration to be planned: the first led will turn off and the second will light on. Example: Change of the relay RL1 from impulsive to delayed:
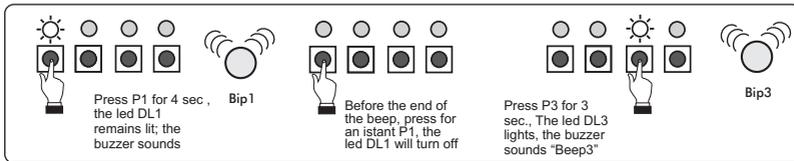

Fig. 14

7C) Range reduction programming

Procedure:

Keep pressed down for 4 sec.the button corresponding to the selected relay up to the acoustic signal; the corresponding led will light; within 2 sec. press the button P1 and subsequently press the button P4. Besides the corresponding led will light also the led DL4.

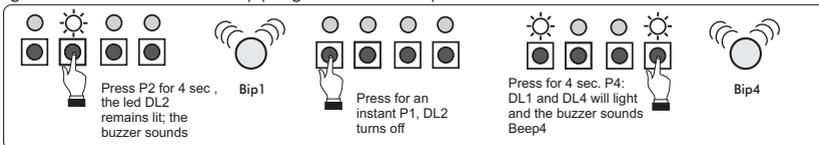Example: Range reduction of RL2 already programmed as impulsive.

Fig. 15

7D) Range reduction removal

Repeat the above procedure and verify that the led DL4 turn-off at the end.

8E) Relay release time programming

The release time after which the relay programmed as delayed releases is programmable.

The value of the time can be introduced making use of the buttons P1 and P2. Through 8 pressures on P1 and P2, to which correspond as many lightings of the leds DL1(Red) and DL2 (Green), it is possible to introduce a number in binary coding that gives the value of the delay.

 Procedure:

 - Press for 4 sec. the button corresponding to the relay to which you want to modify the delay time;

The configuration led lights on; subsequently press P3: the leds lit will turn off; after begin the sequence of 8 pressures off P1 and P2 in base to the desired time and according to Tab.2. An acoustic signal points out the end of the procedure

Push buttons	1°	2°	3°	4°	5°	6°	7°	8°
Seconds	1	2	4	8	16	32	P1	P1
Seconds	10	20	40	80	160	320	P2	P1
Minutes	2	4	8	16	32	64	P1	P2
Minutes	20	40	80	160	320	640	P2	P2

Tab. 3

One pressure on P1 has weight 0 while one pressure on P2 has weight 1. So, once finished all the pressures concerning to the chosen value, it isn't necessary to effect the remaining pressures on P1

Example 1 = 8 sec. delay : introduce the sequence : P1 - P1 - P1 - P2 - P1 - P1 - P1 - P1.
Example 2 = 2 min. delay: introduce the sequence : P2 - P1 - P1 - P1 - P1 - P1 - P1 - P2.

9 - MEMORY MANAGEMENT

8A) - Transmitter memory position display

It is possible to display the memory position of the last received transmitter.

Procedure:

Activate the transmitter ; then press in sequence : the button P4 for 4 sec., P4 again for one instant and then P1. The receiver begins a sequence of 8 lightings of DL1(red) and DL2 (green), following pointed out for simplicity as LR and LV: referring to that it is possible to find the memory position occupied by the code just received. The number pointed out by the sequence of lightings is calculable by the following table:

Led lit	1°	2°	3°	4°	5°	6°	7°	8°
Green led weight	1	2	4	8	16	32	64	128
Red led weight	0	0	0	0	0	0	0	0

Tab. 4

Esempio:

Led lighting sequence: LR, LV, LV, LV, LR, LR LR, LR

Result number: 0 +0 +4 +8 +0 +0 +0 +0 = 12

Then the transmitter occupies the 12th position of the memory.

8B) - Display of the programmed delay of each relay

It is possible to display the delay time planned on the relay programmed as delayed.

Procedure:

Press for 4 sec the button corresponding to the relay which has to be check; press then in sequence: P4 for 1 sec. and then P3 for one instant. At this point a sequence of 8 lightings of the leds LD1 and LD2 commences: referring to that it is possible to calculate the planned delay.

The number shown by the sequence is given by the Tab.2.

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9C) - Used memory space display

It is possible to display the memory positions occupied

Procedure:

Press in sequence : P4 for 4 sec., After P4 and then P2 for an instant. At this point a sequence of 8 lightings of the leds LD1 and LD2 commences: referring to that, it is possible to calculate the planned delay.

The number shown by the sequence is given by the Tab.2.
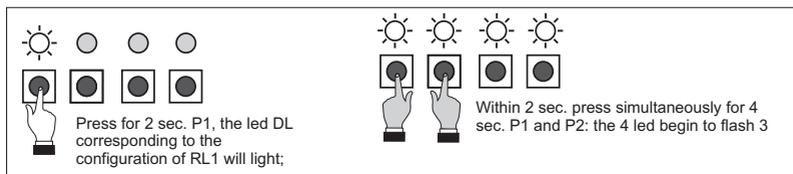
9D) - Total memory erasure:using the receiver buttons

It is possible to cancel all the transmitter codes memorised by using the receiver buttons.

Procedure:

Keep P1 pressed down until DL1 remains lit and release it. - Within 2 sec. Keep P1+P2 pressed down simultaneusly until the 4 leds DL1, DL2, DL3, DL4 start flashing .

ATTENTION : At the end of the sequence the memory will be totally erasen and all the present codes will be lost!

Press for 2 sec. P1, the led DL corresponding to the configuration of RL1 will light;

Within 2 sec. press simultaneously for 4 sec. P1 and P2: the 4 led begin to flash 3

9E) - Total memory erasure:using the transmitter keys

t is possible to cancel all the transmitter codes memorised even by using a transmitter keys.

Procedure:

Keep the keys A + B simultaneously of a transmitter already present in the memory until occurs the acustic signal. - Release both the keys and, within 2 sec. Press the key A until the acustic signal, then release and press A + B simultaneously until the buzzer sounds 3 "beep".

9F) - Replacement of a stored transmitter

Through this procedure is is possible to overwrite a memory location accupied by a transmitter with a new transmitter code.

Procedure:

Entry in programming mode by pressing down the button corresponding to the relay to which the transmitter, which has to be replaced, is associated. Press P2 and then, making use of P1 and P2, set the number of the memory cell to overwrite, composing the sequence referred at table 3. At the end, within 4 sec (during the acustic signal) press the key of the new transmitter.

Note

Garanzia

La garanzia è di 24 mesi dalla data di fabbricazione apposta all'interno.
Durante tale periodo, se l'apparecchiatura non funziona correttamente, a causa di un componente difettoso, essa verrà riparata o sostituita a discrezione del fabbricante.
La garanzia non copre l'integrità del contenitore plastico.
La garanzia viene prestata presso la sede del fabbricante.

Guarantee

Guarantee period: 24 months from the productions date placed inside.
In this period if the appliance has any malfunction due to a defective component,it will be repaired or replaced by the manufacturer.
The warranty doesn't cover the plastic box.
The assistance will be performed at the manufacturer site.

Garantie

La période de garantie des produits est de 24 mois, à compter de la date de construction.
Durant cette période, si les produits ne fonctionnent pas correctement, cela, à cause d'un composant défectueux, le produit sera réparé ou remplacé à la discrétion du fabricant.
La garantie ne couvre pas le boîtier en plastique.
Le service après-vente sera fourni par le fabricant.

Garantie

Die Garantie beträgt 24 Monaten vom inneren angezeigten Herstellungsdatum.
Während solcher Periode, wenn das Gerät nicht korrekt wegen eines defekten Bauelements arbeitet, wird es beseitigt oder nach Hersteller Entscheidung ersetzt.
Die Garantie bedeckt die Integrität des plastischen Gehäuses nicht.
Die Garantie wird beim Sitz des Herstellers geleistet.