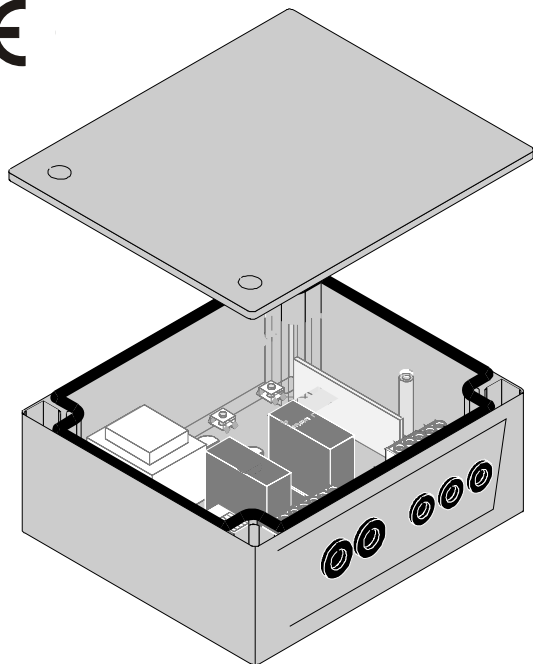


ERONE POWER RECEIVER 2 RELAYS



MANUAL
INSTALLATION



SEL 2641 R433C2V
SEL 2641 R433C2P

SEL 2641 F433C2V
SEL 2641 F433C2P

Thank you for choosing a product Erone. You are recommended to read carefully this manual before installing the product.

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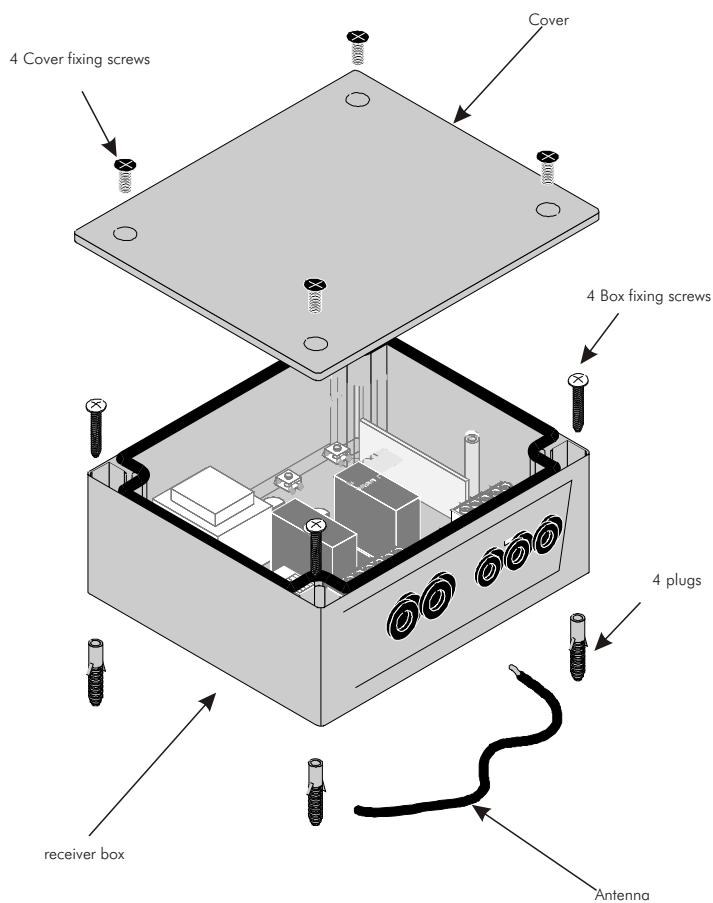
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1- PRODUCT OVERVIEW



2 - INTRODUCTION

The receivers ERONE 433 types. *SEL2641 R433 C2V / C2P* and *SEL2641F433C2V/C2P* are superheterodyne receivers of the series ERONE 433. The product 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 synchronised 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 2 output relays, with NO (Normally open) and 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 max power commutable is 3,5 KW @ 230 Vac for each relay.

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 Series can manage the serial number and the synchronisation algorithm of many transmitters.

The receiver is produced in 2 models which differ by the power supply and the modulation :

RX Model	Power supply	Usable transmitters
SEL 2641 R433 C2P SEL 2641 R433 C2V	12 / 24 Vac-dc 230 Vac	S2TR2641E2/E4/E2M SETR2641AM2 / SETR2641TM
SEL 2641 F433 C2P SEL 2641 F433 C2V	12 / 24 Vac-dc 230 Vac	S2TR2641F2/F4/F2M SETR2641FM2

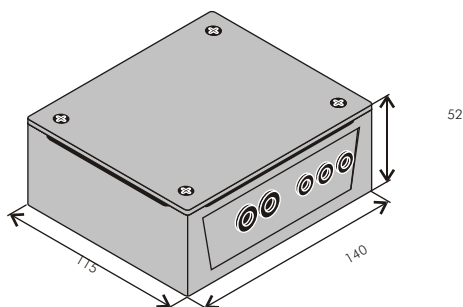


Fig. 1

3 - TECHNICAL SPECIFICATIONS

The Series R433 use AM/ASK demodulation;

The Series F433 use AM/ASK demodulation;

Characteristics (Mod. AM) (Mod. FM)	SEL 2641R433C2V SEL 2641F433C2V	SEL2641R433C2P SEL2641F433C2P
Receiver type	Superheterodyne	Superheterodyne
Carrier frequency	433.92 MHz	433.92 MHz
Local oscillator frequency	6,6128 MHz	6,6128 MHz
Modulation	AM/ASK - FM/FSK	AM/ASK - FM/FSK
Input impedance	50 Ohm	50 Ohm
Channel lenght	> 25 KHz	> 25 KHz
Intermediate frequency	10,7 MHz	10,7 MHz
Input sensitivity	-115 dBm	-115 dBm
Local oscillator emissions	< -57 dBm	< -57 dBm
Power supply	230 Vac	12 - 24 Vac-dc
Consumption	28 mA	200 mA @ 24 Vac 260 mA @12 Vac
Max applicable power at relay contacts	3,5 KW / 230 Vac	3,5 KW / 230 Vac
User codes max	85	85
Operating temperature	-20°/+70°C	-20°/+70°C
IP Grade	IP44	IP44
Weight	400 gr.	300 gr
Overall dimensions (mm)	140 x 115 x 52	140 x 115 x 52
Selflearning radio memorisation	yes	yes

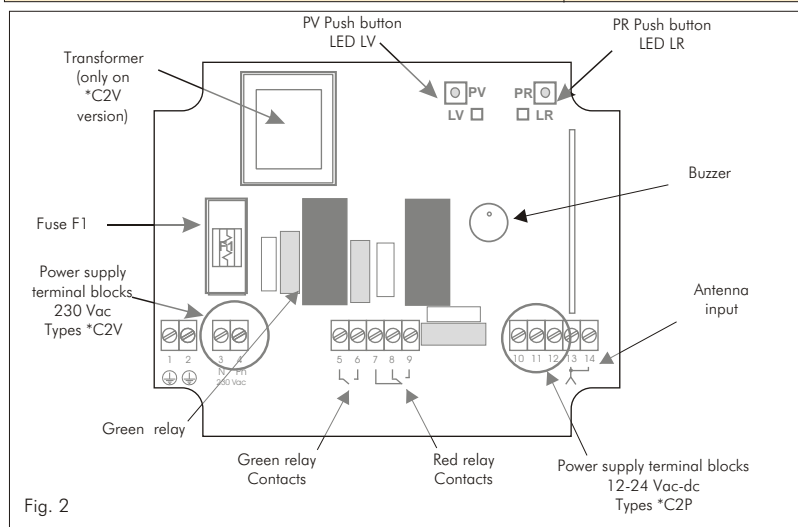


Fig. 2

4 - MAIN FEATURES

- Self-learning and erasing of the transmitter code simply using the transmitter keys, without accessing to the receiver board;
- 85 storable transmitter keys;
- Display of the stored transmitter keys number;
- Display of the code memory position for the last received transmitter;
- Overwrite of the transmitter code stored;
- Full memory erasure;
- Programmable operation of the relays: monostable, bistable, delay.
- Programmable delay of release for the relays from 1 sec. to 10 hours.

5 - INSTALLATION

The appliance has been manufactured in compliance with the European Directives 89/336/CEE, 73/23/CEE, 99/5/CE and with the Regulation EN

5.1 - Positioning

The location choice is very important for the best result of the installation.

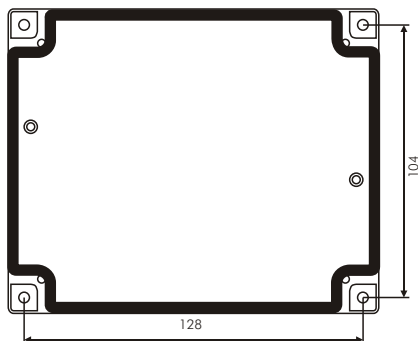
The following conditions have to be followed:

- Fix the receiver far from interference sources as informatic systems, alarm systems or other radio emissions.
- the distance between 2 receivers should be more than 1.5 m.

5.2 - Fixing

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

Fig. 3



5.3 - Connections

The connections are different depending on the power supply of the receiver.

1A- Connect the power supply 230 Vac to the terminal blocks 1,3 and 4 (fig. 4):

terminal 1 = PE Ground

terminal 3 = N neutral

terminal 4 = Ph Phase

ATTENTION : Connect the appliance to the electric plant of the building through a magnetothermic switch with contact distance of at least 3 mm.

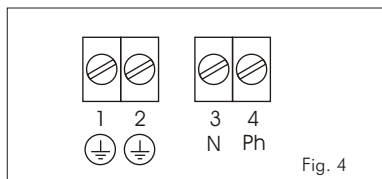


Fig. 4

1b - Connect the power supply 12 / 24 Vac/dc to the terminal blocks 10, 11, 12. (fig. 5):

terminal 10 = + 24 Vac/dc

terminal 11 = + 12 Vac/dc

terminal 12 = 0

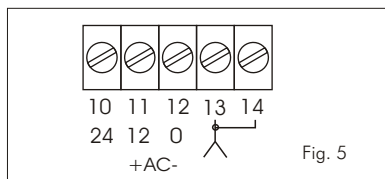


Fig. 5

2 - Connect the loads to the relay outputs according the following table (fig. 6):

terminal 5 = C relay green (RV)

terminal 6 = NO relay green (RV)

terminal 7 = NC relay red (RR)

terminal 8 = C relay red (RR)

terminal 9 = NOA relay red (RR)

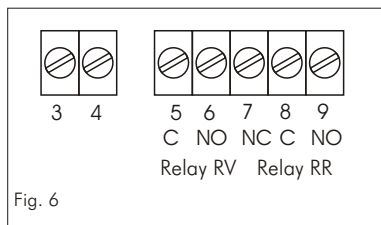


Fig. 6

3 - Connect the antenna as follows (fig. 7):

- if you connect an antenna (not provided) fix the net to the terminal 13 and the shield to the terminal 14; if you use a piece of net (16,5 cm) connect it to the terminal 13.

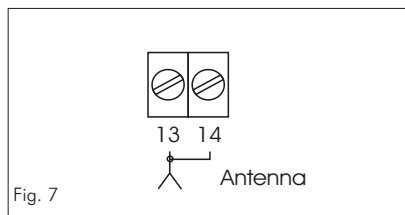
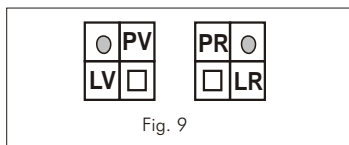


Fig. 7

5.4 - Fuse - Connect the power supply

The fuse F1 (315 mA) is present only on the model SEL2641R433C2V, and protects the electronic card.

6 - TRANSMITTER MEMORISING



The code of each transmitter key can be memorised into the receiver in 2 different ways:

A - Directly on the receiver, through the buttons PR and PV.

B - By radio, using the transmitter keys only, in self-learning mode.

6.1A - Direct memorising “Red relay output”

1. Keep pressed down for 2 sec the button PR of the receiver until the led LR remains lit ;

2. Release PR

3. Within 2 sec. activate the transmitter key which is to be memorised and check the relay RR activation which confirms that the memorisation has been carried out.

6.1B - Direct memorising “Green relay output”

1. Keep pressed down for 2 sec the button PV of the receiver until the led LV remains lit ;

2. Release PV

3. Within 2 sec. activate the transmitter key which is to be memorised and check the relay RV activation which confirms that the memorisation has been carried out.

6.2 - Self-learning memorising Output “Red relay” (“Green relay”)

Phase 1: Programming request.

Keep pressed down the transmitter keys (A+B) until the buzzer emits a bip and both the led LR and LV flash for a while.

Phase 2: Programming enabling

Keep the key A (B) pressed down for 4 sec of the

same TX : the led LR remains lit (the led LV start to flash) and the buzzer emits a long bip (starts to bip = Bip, Bip, ..Bip).

Phase 3: Memorisation

Within 2 sec activate the transmitter key which is to be memorised.

The led LR (LV) stop flashing and the corresponding relay excites for a while giving the confirmation of the memorisation.

Phase 4: Check of the memorisation

Activate the key just memorised and verify the relay activation RR (RV).

NOTE 1: Any following memorisation is allowed only by using a transmitter already memorised

Example : Memorisation of a second TX with keys A on red relay and B on green relay

- Press A+B on TX1 (bip) ; Press A on TX1 for 4 sec. (Biiiiiiiiiiip) ; press A on TX2 within 2 sec.

- Premere A+B on TX1 (bip) ; Press B on TX1 for 4 sec. (Bip, Bip, ..Bip) ; press B on TX2 within 2 sec.

NOTE 2: The receiver is set-in-factory for a pulse behaviour of the relays

For the settings of the relay in step or delayed mode see next paragraphs.

NOTE 3: The memory can store up to 85 transmitter keys. That means that a 4 keys transmitter uses 4 memory slots.

6.3 - Memory full

If both the leds LV and LR start to flash at the end of Phase2 it means that the memory is full.

7 - MEMORY MANAGEMENT

7.1 - Transmitter memory position display.

Through the following procedure it is possible to display the memory position of a transmitter key

Press down the transmitter key to verify and check the relay activation and the led

Press down the button PR for 1 second.

From this time on, a sequence of 7 flashes of the led LR and LV commences . By annotating the sequence it is possible to calculate the memory position of the transmitter key, referring to the following table:

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

Tab. 1

Example :

Led sequence : LR, LR, LV, LV, LR, LR, LR.

Equivalence to calculate: $0 + 0 + 4 + 8 + 0 + 0 + 0 = 12$

The transmitter key was been memorised into the 12th memory position.

7.2 - Memory capacity display

Through the following procedure it is possible to display the memory capacity

Press down the button PV for 1 second.

From this time on, a sequence of 7 flashes of the led LR and LV commences

By annotating the sequence it is possible to calculate the number of memory positions occupied

7.3 - Cancelling the entire memory

This operation is possible both with the receiver button and with the transmitter keys.



At the end of the procedure all the data present in the memory have been cancelled

7.3.1 By Radio : Keep keys (A+B) of a memorised transmitter pressed down until the buzzer emits a bip and both the leds flash for a while .

Within 2 sec press the key A of the same transmitter for 4 sec.

At his point the led LR remains lit and the buzzer emits a continous bip.

Within 4 sec, keep the keys (A+B) pressed down for further 4 sec until the buzzer emits 3 bips and both the led LR and LV flashes 3 times.

At the end of the procedure all the data present in the memory have been cancelled.

7.3.2 With the receiver buttons:

Press the button PR of the receiver until the led LR lits. Release PR and within 2 sec keep both the buttons PR and PV pressed down for 4 sec until until the buzzer emits 3 bips and both the led LR and LV flashes 3 times.

7D - TX code overwrite

Make a programming request (as shown in chapter 6.2)

Press PR or PV on the receiver for 4 sec, the red led LR or green led LV remains lit, showing the relay operating mode.

Within 2 sec, press PV for 1 sec and the led will turn off.

Within 2 sec start to input the sequence which represent the position to overwrite (see tab. 1) by pressing down the buttons PR or PV.

At the end of the sequence the led LR or LV remains lit.

Within 4 sec activate the transmitter key which is to be memorised.

NOTE : A transmitter key already memorised can't be used for an overwriting.

8 - RELAY SETTINGS

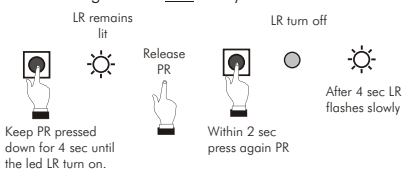
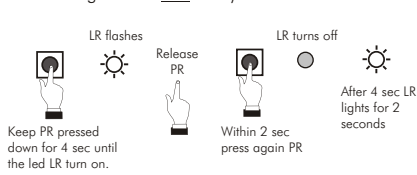
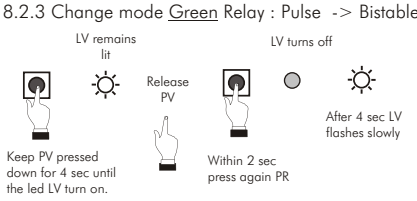
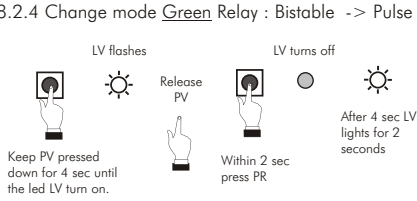
8.1 - Relay setting display

The operating mode of each relay can be displayed by the flashing of the corresponding led according the following table:

Led (LRod LV)	Relay operating mode
Continous light	Pulse mode
Flashing light	Bistable mode
Fast flashing light	Timered mode

8.2 - Relay operating mode setting (pulse / bistable)

The operating mode of each relay can be set according the following procedures:

<p>8.2.1 Change mode <u>Red</u> Relay : Pulse -> Bistable</p> <p>LR remains lit</p>  <p>Keep PR pressed down for 4 sec until the led LR turn on.</p> <p>Release PR</p> <p>Within 2 sec press again PR</p> <p>LR turn off</p> <p>After 4 sec LR flashes slowly</p>	<p>8.2.2 Change mode <u>Red</u> Relay : Bistable-> Pulse</p> <p>LR flashes</p>  <p>Keep PR pressed down for 4 sec until the led LR turn on.</p> <p>Release PR</p> <p>Within 2 sec press again PR</p> <p>LR turns off</p> <p>After 4 sec LR lights for 2 seconds</p>
<p>8.2.3 Change mode <u>Green</u> Relay : Pulse -> Bistable</p> <p>LV remains lit</p>  <p>Keep PV pressed down for 4 sec until the led LV turn on.</p> <p>Release PV</p> <p>Within 2 sec press again PR</p> <p>LV turns off</p> <p>After 4 sec LV flashes slowly</p>	<p>8.2.4 Change mode <u>Green</u> Relay : Bistable -> Pulse</p> <p>LV flashes</p>  <p>Keep PV pressed down for 4 sec until the led LV turn on.</p> <p>Release PV</p> <p>Within 2 sec press PR</p> <p>LV turns off</p> <p>After 4 sec LV lights for 2 seconds</p>

WARNINGS

The receiver is sold with the pulse operating mode for the relays preset.
The modifications on the relay operating mode can be done only with the receiver push/buttons PR and PV.

1) It isn't allowed a configuration in which both the relays are set as timered mode with different release times. The final release time is the last one set.

2) In case of Bistable + Timered configuration the only setting allowed is :
Green relay = Bistable
Red relay = Timered.

9 - RELAY TIMING SETTINGS

9.1 Timered mode setting procedure

Each relay can be set in timered mode by means of a sequence of 7 pressures of the push buttons PR and PV. The weight of PR is "0", the weight of PV is "1".
The release time can be calculated with the following table:

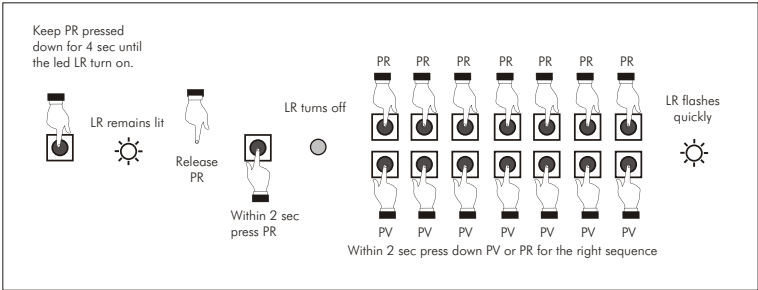
Button activations	1°	2°	3°	4°	5°	6°	7°
Seconds	1	2	4	8	16	PR	PR
Seconds	10	20	40	80	160	PV	PR
Minutes	2	4	8	16	32	PR	PV
Minutes	20	20	80	160	320	PV	PV

That means that if the release time to set is 2 seconds, the sequence of pressures has to be :
PR - PV - PR - PR - PR -PR - PR
The times associated at each number of the above table can be summed.

EXAMPLES : Release time of 12 sec : Sequence : PR - PR - PV - PV -PR - PR - PR.
 Release time of 40 sec : Sequence : PR - PR - PV - PR - PR - PV - PR.
 Release time of 6 min : Sequence : PV - PV - PR - PR -PR - PR - PV.

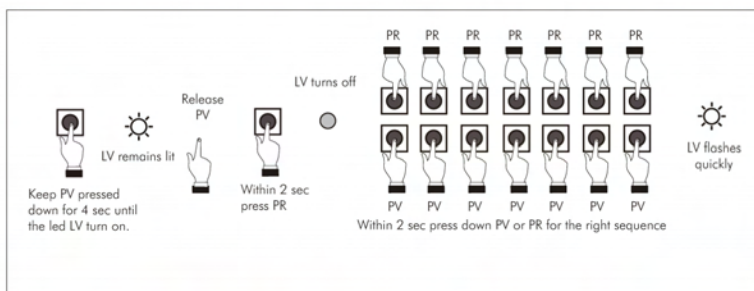
9.1.1 Procedure for Red Relay RR

The following procedure has to be followed for the release time setting on red relay RR



9.1.2 Procedure for Green Relay RV

The following procedure has to be followed for the release time setting on green relay RV



For further information, please, visit internet site www.erone.com

NOTE

GUARANTEE

The guarantee period of all Erone products is 24 months, beginning from the manufacturer date. During this period, if the product does not work correctly, due to a defective component, the product will be repaired or substituted at the discretion of the producer. The guarantee does not cover the plastic container integrity. After-sale service is supplied at the producer's factory.

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