

ERONE WIEGAND RECEIVER SELWR433-800

1- Introduction

The receiver Wiegand SELWR433-800 is a superheterodyne receiver operating at the frequency 433,92 MHz in AM/ASK modulation. It is composed by a main board in which there are the power supply output connectors and by a RF card.

Are available 3 open-drain outputs: DATA0 and DATA1, with Wiegand 26 or 30 bit format and a CLOCK

It's possible to make a backup and a restore of the memory data to an external memory.

The appliance is housed in an indoor enclosure.

Hereby, CDVI Wireless Spa, declares that the radio equipment type SELWR433-800 is in compliance with directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.erone.com.

2- Compatibel transmitters

- | | | |
|-----------|-----------------------|---------------------------|
| • 024A | Type S2TR 2641 E2-E4: | 2/4 button transmitters |
| • Mini | Type SETR 2641 AM2: | 2 button mini transmitter |
| • Wall | Type SETR 2641 TM: | Wall transmitter |
| • Digikey | Type SEDK 2641 A4: | Keypad transmitter |

3- Technical specifications

Receiver type	Superheterodyne
Demodulation	AM
Carrier frequency	433,92 MHz
Local oscillator frequency	6,6128 MHz
Intermediate frequency	10,7 MHz
Sensitivity	-115 dBm
Output impedance	50 Ohm
Power supply	12/24 Vac/dc
Current consumption :	25 mA
Outputs	Wiegand 26 or 30 bit
Outputs type	DATA0, DATA1, CLOCK
Max code number	800
Operating temperature	-20 - +70°C
Overall dimensions (fig. 1)	105 x 45 x 28 mm
Weight	65 g

4- Caracteristiques principales

- 800 transmitter codes memory.
- Wireless transmitter memorisation
- Backup and restore of memory data to and external memory
- Full memory erasure.
- Output signal DATA0, DATA1, CLOCK with 10KOhm pull-up resistor
- Output signal DATA0 and DATA1 which fulfill to 26 or 30 bit Wiegand standard (see. Par. 16 - 17)
- The CLOCK signal is the logic OR of DATA0 and DATA1

Overall dimensions

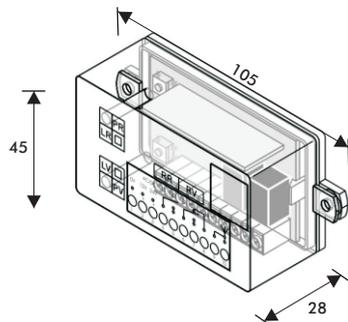


Fig. 1

Connection

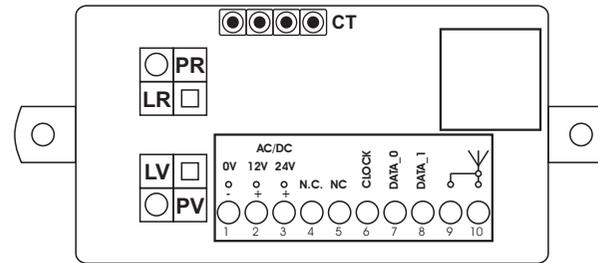


Fig. 2

5-Receiver details (Fig. 2)

- | | | | |
|-----|-------------------------|-----|-------------------|
| LR: | Led Red | LV: | Led Green |
| PR: | Push button red | PV: | Push button green |
| CT | Backup Memory connector | | |

6 -Connections (Fig. 2)

- Power supply : Terminals 1 and 2 : 12 Vac/dc
 Terminals 1 and 3 : 24 Vac/dc
- Antenna : Terminal 9 : GND antenna (Rg58)
 Terminal 10 : Antenna.
- Clock: Terminal 6 : CLOCK
- Wiegand: Terminal 7 : DATA_0,
 Terminal 8 : DATA_1

7 - Backup memory plug-in

To plug-in the backup memory remove the transparent cover and plug-in the memory into the corresponding 4-ways female connector (CT), making attention to the right polarization : the round shape has to be put inward facing the radio card. (Fig. 3)

Memory plug-in

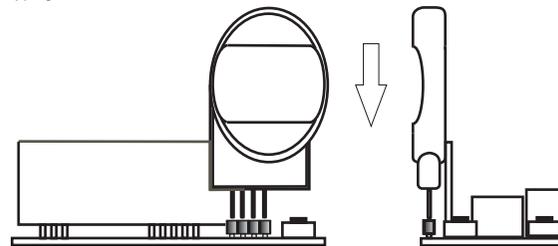


Fig. 3

8 - Receiver initialization

The receiver enables the access, sending out the corresponding Wiegand message, only to the transmitters with the FACILITY CODES memorized.

The init operation has to be performed during the product installation.

In this way it's possible to memorise up to 2 FACILITY CODES and to enable up to 4 transmitter keys. The internal receiver memory has 4 locations which keep this information.

Procedure

1) Memorisation of the first transmitter key (Fig.4)

Keep the button PR pressed down until the led LR turns on and then release it. Press the first key of the transmitter: in this way the key and the FACILITY CODE of the transmitter are stored into the first memory location.

2) Memorisation of the second transmitter key (Fig.5)

Keep the button PR pressed down until the led LR turns on and then release it. Press the button PR again once and the led PR will flash once by confirming that the location N° 1 is going to be memorised : at that point press the second key of the transmitter.

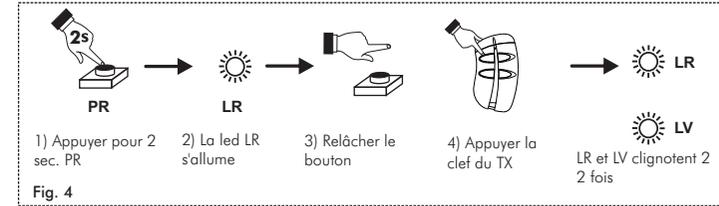


Fig. 4

3) Memorisation of the third transmitter key (Fig.5)

Keep the button PR pressed down until the led LR turns on and then release it. Press the button PR again twice and the led PR will flash twice by confirming that the location N° 2 is going to be memorised : at that point press the third key of the transmitter.

4) Memorisation of the fourth transmitter key (Fig.5)

Keep the button PR pressed down until the led LR turns on and then release it. Press the button PR again three times and the led PR will flash three times by confirming that the location N° 2 is going to be memorised : at that point press the third key of the transmitter.

Finally the led RED and GREEN will flash twice simultaneously.

NOTE : the init procedure set the enabled FACILITY CODE and transmitter KEYS but doesn't store the serial number.

This is done in self-learning for each transmitter. Only at the end of the self-learning procedure the wiegand frame is sent out by the receiver.

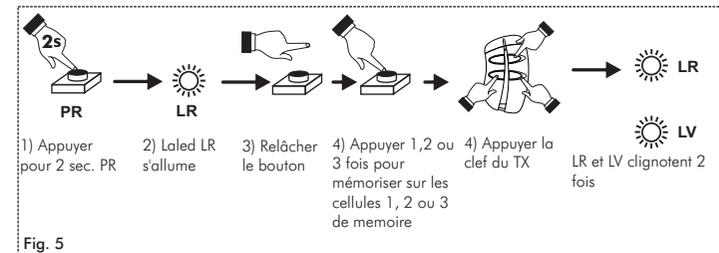


Fig. 5

9 - Replacement of a location already occupied

ATTENTION : If the memorisation is done on a location already occupied, the cell is replaced with the new data.

10 - Memorisation of the user transmitters

After the initialisation, you need to memorise the transmitters.

You can memorise only the transmitters with the same FACILITY CODE introduced during the initialisation phase.

The memorisation of the transmitter can be done directly by the final user, by following the procedure below.

Procedure

Push 3 times the key of the transmitter which has to be memorised.

After the third transmission received, the receiver will send out the corresponding signal along the Wiegand output and will flash once both the led RED and GREEN simultaneously.

From this time on the receiver will check the FACILITY CODE, S/N and ROLLING CODE COUNTER of any incoming signal, by disabling in this way the access of any signal which doesn't respect the right specifications.

11 - Memory full and auto-deleting of the never used transmitters.

The self learning is allowed to any allowed transmitter. It can happen, anyway, that the memorisation of a new transmitter is tried when the memory is already full.

In this case the main microprocessor deletes the transmitter S/N less used in order to create room and to enable the new one

On the firmware has been created

À chaque émetteur est associé, en effet, un compteur qu'il tient compte de la fréquence de jouissance. L'utilisateur de l'émetteur effacé peut, à son tour, re-mémoriser le propre code au détriment d'un autre, en appuyant la clef de l'émetteur qui 3 fois consécutives.

Périodiquement est possible d'effacer toute la mémoire, si trop pleine, en permettant de nouveau l'auto-mémorisation.

12 - Output message format changement

With the following procedure it is possible to change the format of the output wiegand message, by setting it in 26 or 30 bits.

Procedure

Press and keep pressed the button GREEN for 4 sec. until the led GREEN turns on and then release the button. At this point the led GREEN will show the current message according to the following rule:

GREEN LED ON --> 26 bits message
GREEN LED BLINKING --> 30 bits message

To change the message type, press the button RED for one sec.: you will change the type from 26 to 30 or from 30 to 26. The GREEN led will change to confirm the changement.

13 - Memory erasure (fig. 6)

With this procedure, you will erase completely the memory.

This means that all the transmitters will be erased and the memory will be brought to its previous the state, before the initialisation.

Procedure

- 1) Press PR until the led RED turns ON
- 2) release PR and then keep PR and PV pressed simultaneously for 4 sec until the 2 leds flash 3 times.

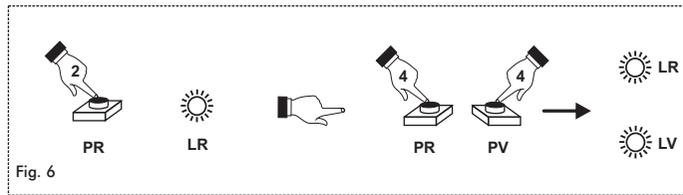


Fig. 6

14 - Memory data transfer : from receiver to backup memory (fig. 7)

Procedure

- 1) Slot-in the backup memory into the connector CT.
 - 2) Keep the button PR pressed down until the RED led LR turns on.
 - 3) Push the button PV for 1 sec and then confirm with PV again.
 - 4a) If the memory is empty, the led GREEN will turn ON and, after 2 sec., both the led LR and LV will blink 3 times simultaneously.
 - 4b) If the memory is full the leds will turn on showing that the memory is full. To go on, and make the transfer, confirm by pressing the button PV. At this point the led RED LR will turn ON
- At the end of the transfer, both the led LR and LV will blink 3 times simultaneously to confirm the success of the data transfer.

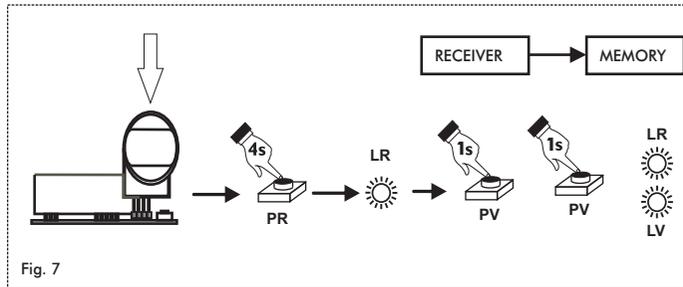


Fig. 7

15 - Memory data transfer : from backup memory to receiver (fig.8)

Procedure

- 1) Slot-in the backup memory into the connector CT.
 - 2) Keep the button PV pressed down until the GREEN led LV turns on.
 - 3) Push the button PV for 1 sec.
 - 4a) If the memory is empty, the led GREEN will turn ON and, after 2 sec., both the led LR and LV will blink 3 times simultaneously.
 - 4b) If the memory is full the leds will turn on showing that the memory is full. To go on, and make the transfer, confirm by pressing the button PR. At this point the GREEN led LV will turn ON
- At the end of the transfer, both the led LR and LV will blink 3 times simultaneously to confirm the success of the data transfer.

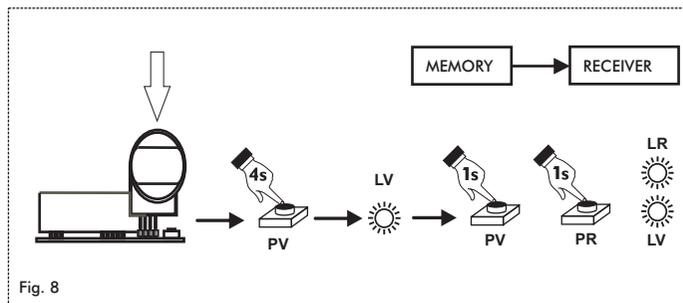


Fig. 8

16 - Output signal structure

26 bit Wiegand

P1	Facility code	Serial number	P2
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LEGEND :

P1 = Even parity of the first 12 bits (bit 1)
Facility code = 8 bit (bit 2 .. , bit 9)
Serial Number = 16 bit (bit 10 .. , bit 25)
P2 = Odd parity of the last 12 bit (bit 26)

30 bit Wiegand

P1	0000	Facility code	Serial number	P2
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LEGEND :

P1 = Even parity of the first 14 bits (bit 1)
0000 = 4 bits fixed to "0"
Facility code = 8 bit (bit 6 .. , bit 13)
Serial Number = 16 bit (bit 14 .. , bit 29)
P2 = Odd parity of the last 14 bit (bit 30)

17 - Timing diagram for DATA0, DATA1 and CLOCK

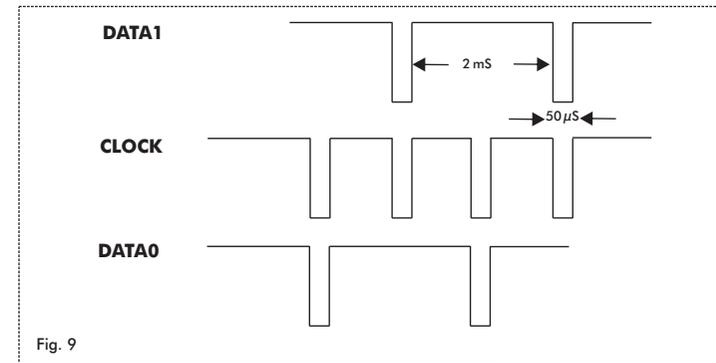


Fig. 9

GUARANTEE

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



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