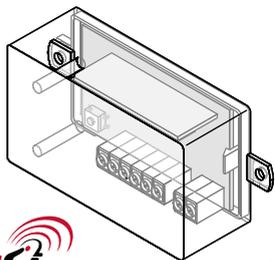


433 MHz WIEGAND RECEIVER



MANUAL
INSTALLATION



RECTSWEI433

Thank you for choosing a Transmitter Solutions product. Please read this manual carefully before installing the product.

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1- RECEIVER INTRODUCTION

1A - Description

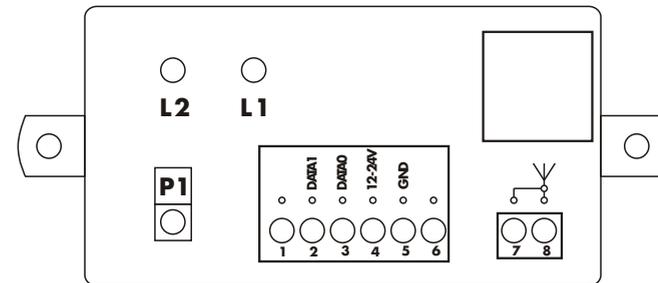
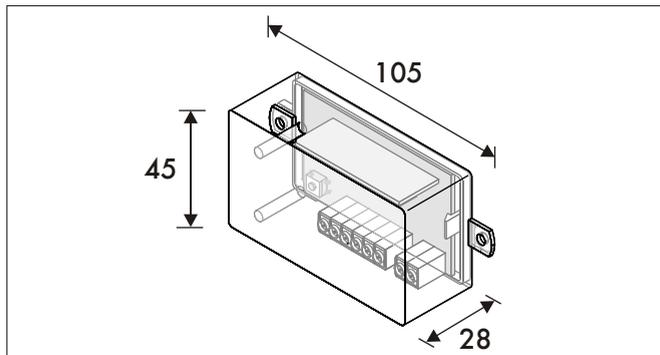
The receiver RECTSWEI433 type 433 is a superheterodyne receiver operating at the frequency 433,92 MHz.

It is composed by a main board in which there are the power supply output connectors and by a RF card.

The two outputs have an open drain configuration with output signal in "Wiegand 26 bit format". The appliance is housed in an indoor container.

1B - Technical specifications

Receiver type:	Superheterodyne.
Demodulation:	AM/ASK.
Operating frequency:	433,92 MHz.
Local oscillator frequency:	6,6128 MHz.
Intermediate frequency:	10,7 MHz.
Sensitivity:	-115 dBm.
Input impedance:	50 Ohm.
Power supply :	12 ÷ 24 V ac/dc.
Current consumption:	24 mA
Output s number:	2
Output type:	Wiegand.
Max output current:	250 mA
Operating temperature:	-20 ÷ +70 °C.
Overall dimensions:	105 x 45 x 28 mm.
Weight:	65 gr.
IP Protection Grade:	IP2X



1C - Receiver Layout

- P1 : Programming button
- L2 : Red led (programming)
- L1 : Green led (power supply)

1D - Terminal board connections

- 1 - Not used;
- 2 - Output DATA1 (Open collector);
- 3 - Output DATA0 (Open collector);
- 4 - Power Supply (12 ÷ 24 Vac/dc);
- 5 - Power GND;
- 6 - Not used;
- 7 - Antenna Shield;
- 8 - Antenna Core;



IMPORTANT

The receiver allocation is very important for the best operation of the system.

Place the receiver far from interference sources such as big magnetic fields or radio emissions.

The installation and the positioning of the antenna is very important as well. Before to install the antenna it is advisable to make some tests on the site.

Use shielded cable type RG58 (impedance 50 Ohm) for the antenna connection.

2- FACTORY SETTINGS

The information contained in the frame sent by the transmitter is composed by a FACILITY CODE , a KEY CODE and by a SERIAL NUMBER.

The set-in-factory receiver doesn't accept any code.

That means that no wiegand formatted signal is carried out from the receiver unless a memorization procedure is performed.

Follow the procedure below to memorize the transmitter codes into the memory receiver.

2- TRANSMITTER MEMORIZATION

Before commencing the procedure make sure that the power led L1 is ON. The EEPROM of the receiver is capable to store up to 50 different combinations: "facility code - Key code".

The key codes of each transmitter can be A, B,A+B, where A+B is the code sent at the pressure of both the keys at the same time.

Combinations of this type can be, for example:

002 - A, 002 - B, 002 - (A+B), 003 - B, 010 - (A+B), and so on.

PART 1 : transmitter key A programming

- 1) Keep the button P1 pressed down until the led L2 turns on and then release it.
- 2) Press the key A of the transmitter which has to be memorized.
- 3) The led L2 turns off and then make a short flash.

PART 2: transmitter key B programming

- 1) Keep the button P1 pressed down until the led L2 turns on and then release it.
- 2) Press the key B of the transmitter which has to be memorized.
- 3) The led L2 turns off and then make a short flash.

PART 3: transmitter key A+B programming

- 1) Keep the button P1 pressed down until the led L2 turns on and then release it.
- 2) Press at the same time the keys A and B of the transmitter which has to be memorized.
- 3) The led L2 turns off and then make a short flash.

If, for any reason, the memorization procedure hasn't been successfully, the led L2 doesn't make the final flash.

Any operation not allowed (memorization with full memory, memorization of already stored codes) causes a 2 quick flashes of led L2.

4- FACILITY CODE CHECK DISABLING

It is possible to disable the check performed by the receiver on the facility code of the received signal.

At the end of the following procedure, the receiver accepts any facility code and maintains the check on the key code.

This new configuration of the receiver is temporary and can be restored by carrying on the same procedure.

- 1) Keep the button P1 pressed down until the led L2 turns on and then release it.
- 2) Within 1 sec. press again P1.

At this point the led L2 start to flash quickly and so the receiver can accept any facility code.

Repeat the phases 1 and 2 to cancel the operation and to recover the initial state.

If a power failure occurs after the phase2 the new configuration is maintained.

5- VISUALIZATION

A short flash of L2 indicates a correct received word but not approved : that means that the facility code or the transmitter code received is wrong.

A flash of 1 second of L2 indicates that a correct signal has been received and that the correct frame in wiegand format has been sent from the outputs DATA0 and DATA1.

6- MEMORY ERASURE

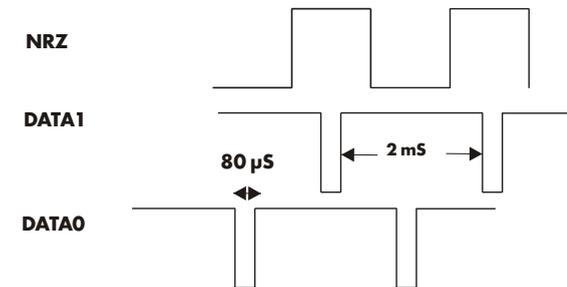
This procedure allows to erase the memory of the receiver.

- 1) Keep button P1 pressed down until L2 turns on.
- 2) Release P1 and then press it again until L2 start to flash 3 times.

At this point the settings stored are cancelled, and the receiver can't accept any transmitter code, as a new product.

7- WIEGAND SIGNAL FORMAT

The timing of the signals DATA0 and DATA1 are the following:



8- FRAME ARCHITECTURE

The 26- Bit Wiegand datagram is composed by as follows:

P1	Facility code	Serial number	P2
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LEGENDA :

P1 = Parity even calculated over the first 12 bit : First bit coming out

Facility code = 6 bit

Serial Number = 18 bit

P2 = Parity odd calculated over the last 12 bit: Last bit coming out

Notice

Any changes or modifications of Transmitter Solutions equipment not expressly approved by Transmitter Solutions could void the user's authority to operate with the equipment.

GUARANTEE

The warranty period of Transmitter Solutions' receivers is 24 months from the to a defective component, the product will be repaired or replaced at the sole discretion of Transmitter Solutions. The warranty does not extend to the receiver case, which can be damaged by conditions outside the control of Transmitter Solutions.



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