Overview

Description of the product

The IRW device is a radio transceiver equipped with two relays in order to carry out the command to the automation control unit to which it is wired, at the "Alt" input. It is equipped with **Nice Solemyo Air Net System** radio technology and is only compatible with devices that use this technology. IRW allows you to connect one or more sensitive edges installed on the moving leaf of an automation for gates, garage doors or similar "wirelessly", without the aid of electrical wires, to the control unit of the automation itself (see fig. 1). Technically, it works as an "interface" for two-way radio communication of data, between the TCW1/2 radio sensors, connected to the sensitive edges, and the control unit belonging to the automation on which these edges are installed. The system works as follows: at the moment when the sensitive edge intervenes, due to an accidental obstacle or for some other reason, the TCW1/2 sensor (wired to this edge) transmits the event via radio to the IRW interface. The latter activates its relays to report the event to the unit to which it is wired. Finally, the unit commands the envisaged safety action (e.g. reversing the manoeuvre in progress).
Communication between the parts is encrypted using high security techniques

It is powered by 12/24V-AC/DC Power supply 0.65 W

Circuit

The circuit consists of:

- An Base Board were are the U3 works like a voltage step down regulator, followed by U4 linear regualator (3V3) for supply the U2 radio Transceiver and U1 Microcontroller.
- The X3 saw filter that erase the harmonics in transmission and protect the receiver from not in band signals.
- The two relays RL1, RL2, that works in " oscillation configuration" that is the work only if the microcontroller send a periodic signal and not with constant signal. The are closed on normal operation and open at first problem.
- The FT1 and FT2 opto transistor that can insulate the circuit from others and receive the signal from automation for start the test of the edges.
- Without this signal the board don't close the relays.