

OPERATIONAL DESCRIPTION

Technical Description: RW-T71 Universal Transmitter

Circuit Operation

The **NOVA 71** is a supervised general purpose transmitter that can be connected to magnetic contacts (door/window protection) or to other sensors. It operates together with Rokonet's programmable receivers and is powered by a standard 3-volt lithium battery.

The transmitter has two parts: digital and RF.

The digital part consists of a microcontroller, a voltage detector and a LED.

The microcontroller will start to operate consequent to a contact activation (closing or opening according to the mode set-up). It will check the voltage detector output (to verify the level of the battery voltage), the status of the contact and it will send a signal to the LED and to the RF part of the circuitry.

According to the position of the contact (open or closed), the microcontroller sends 'Alarm' or 'Restore' messages.

The RF section consists of a key on/off transmitter (oscillator), buffer, output amplifier and a loop high 'Q' resonant antenna.

The oscillator is a SAW stabilized Colpitts with resonant circuit. The buffer is a common emitter amplifier, with a gain of about 3dB, second harmonic rejection of about -6dBc.

The antenna is a high "Q" (about 60) resonance loop type.

The total RF part current consumption is about 12 mA.

The information transmitted by the RF part will depend upon which position of the contact was detected (open or closed, being this alarm or restore according to the set-up).

A 'low battery' signal will be sent as well in case that condition is detected (battery voltage lower than 2.6V), and this will be indicated also by blinking the LED. During 'normal transmission' the LED operates continuously.

Frequency of operation: 318 MHz.

The RW-T71 Universal Transmitter is powered by one internal battery, type DL123A (3V, 200 mA/hr).

Operation description

(1) The operation of the transmitter is as follows:

The microcontroller will start to operate consequent to a contact activation (open or close, according to the set-up).

There is a delay of about 10 msec (FAST mode) or 500 msec (SLOW mode) according to J2 set-up, then a signal will be transmitted (about 1.2sec).

(2) The transmitter will not transmit automatically, except for the supervision signal (see 3).

(3) For the supervision signal, the supervision code will be sent every 65 minutes, and the transmission time is about 1.2 sec.