

# **Functional Description User Manual**

Key: 5WK4 9333

# **User Manual**

**of the**

**Siemens VDO**

**Remote Control System**

**Type:**

**5WK4 9331**

**5WK4 9333**

**5WK4 9334**

## 1. General description of the RF transmitter PL3 ID

The RF remote control system consists of a RF transmitter and a RF receiver mounted within the control unit. The RF transmitter is mechanically integrated in the head of the key. This transmitter is used to transmit an information for locking or unlocking the vehicle by an unidirectional RF transmission line for normal remote operation by pressing a button.

In general the following functions are provided:

- Lock the car
- Unlock the car
- Unlock the trunk of the car

## 2. Power supply

The transmitter is provided with 1 Lithium battery (CR 2032) that gives a power supply of +3V.

## 3. Buttons

There are three buttons which enable to lock and unlock the doors and to unlock the trunk.

During activation, the button is forced to the ground via a "pull-up" within the microcontroller.

## 4. Typical usage pattern (for Europe only)

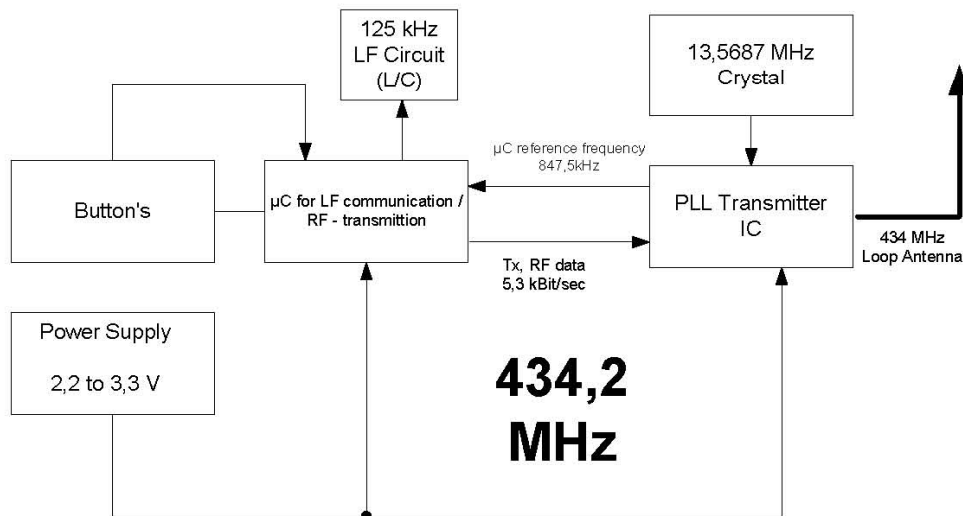
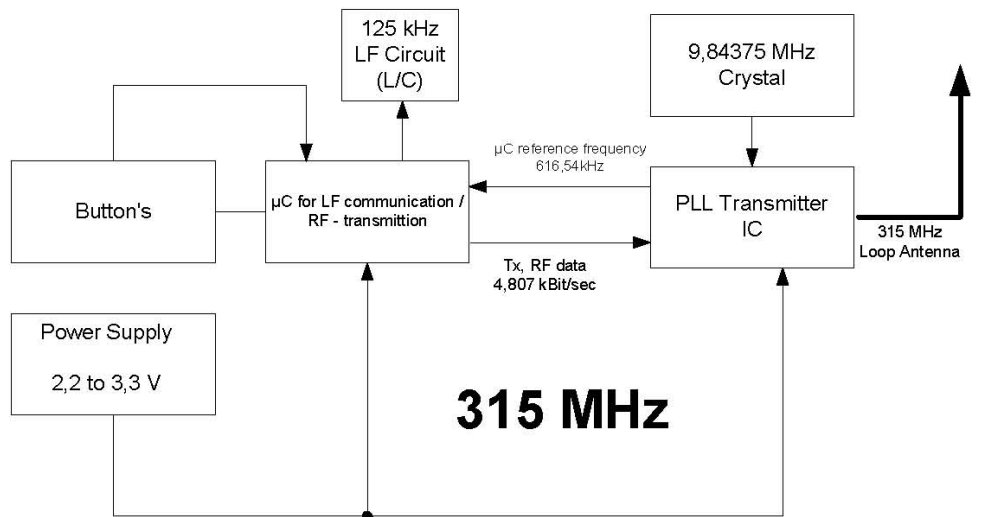
10 lock/unlock operations in 24 hours with typical transmission duration of 2 seconds  
→ 0,42 lock/unlock operations with one hour

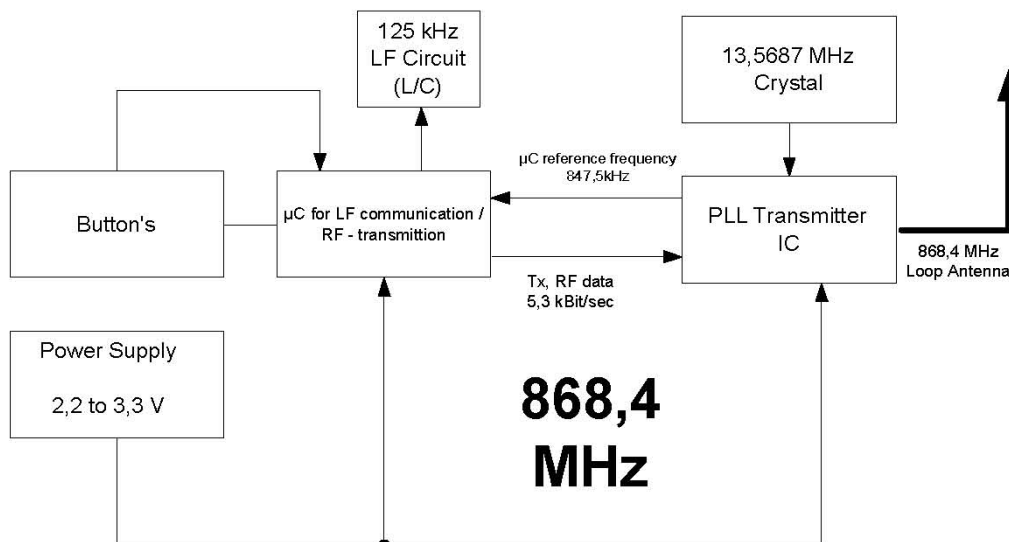
Transmitter ON      0.84              seconds / hour

Transmitter OFF    3599.16            seconds / hour

Duty Cycle:  $T_{ON} / T_{(ON+OFF)} \times 100\% = 0.84 / 3,600 \times 100\% = \underline{0.02\%}$

## 5. Block diagrams of the transmitter





## 6. Variants

Model	Description
5WK4 9331	868.4MHz variant for Europe
5WK4 9333	315MHz variant for USA
5WK4 9334	315MHz variant reduced power for Japan

## 7. Technical Data

Carrier frequency model 5WK4 9331:	868.4 MHz $\pm$ 0.05%
Carrier frequency model 5WK4 9333:	315.0 MHz $\pm$ 0.05%
Carrier frequency model 5WK4 9334:	315 MHz $\pm$ 0.05%
Output power model 5KW4 9331/9333:	< 10 mW
Field strength model 5WK4 9334:	< 500 $\mu$ V/m @ 3m
Type of modulation model 5KW4 9331/9333:	FSK
Type of modulation model 5WK4 9334:	ASK
Method of frequency generation:	PLL
Number of channels:	1
Power supply:	battery (CR2032)
Type of akkku:	lithium
Transmission range:	<10 m
Type of RF-antenna:	Loopantenne
Length of RF-antenna:	66 mm

Siemens VDO Automotive AG

SV C BC P2 RF

IC: 267T-5WK49333

FCC ID:KR55WK49333

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## **8. LABEL DESIGN**

### **Europe: (868 MHz)**

Siemens VDO  
5WK4 9331



### **Japan: (315 MHz)**

Siemens VDO  
5WK4 9334

### **USA/CAN: (315 MHz)**

Siemens VDO  
5WK4 9333  
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This device complies with part 15 of the FCC Rules and RSS-210. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept interference received, including interference that may cause undesired operation.