

User Manual / Functional Description

of the

Siemens VDO

TX Transmitter

type 5WY 8201-2-3-4-5-6

General description of the RF transmitter

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 trunk

Power supply

The transmitter is provided with 1 Lithium battery (CR 1616) that gives a tension of feeding of +3V.

The battery inversion is protected mechanically.

Buttons

There are two buttons which enable to lock, unlock the doors and unlock the trunk. During activation, the button is forced to the ground via a "pull-up" within the microcontroller.

LED

The LED is turned on between transmission blocks.

Variants

Siemens type designation	frequency	difference
5WY 8201	315 MHz	without transponder
5WY 8202	315 MHz	with transponder-master
5WY 8203	315 MHz	with transponder-non master
5WY 8204	433 MHz	without transponder
5WY 8205	433 MHz	without transponder
5WY 8206	433 MHz	with transponder-non master

All variants have the same schematic, pcb and layout. The only difference is the transponder usage.

Typical usage pattern

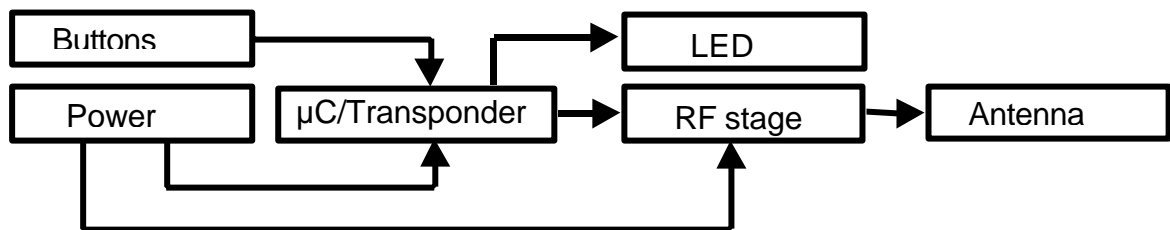
30 lock / unlock operations in 24 hours with a typical transmission duration of 270 milliseconds → 1.25 lock / unlock operations / hour

Transmitter ON 0.3375 seconds / hour

Transmitter OFF 3,599.6625 seconds / hour

Duty Cycle: $T_{ON} / T_{(ON+OFF)} \times 100\% = 0.3375 / 3,600 \times 100\% = 0,009\%$

Block diagram of the transmitter



Technical Data:

Carrier frequency:	315 MHz ± 0.05%
Carrier frequency	433 MHz ± 0.05%
Output power/field strength:	< 10 mW
Type of modulation:	ASK
Method of frequency generation:	SAW
Number of channels:	1
Power supply:	battery (CR 1616)
Type of battery:	lithium
Transmission range:	< 6 m

Label design

Europe: (433.92 MHz)

SIEMENS VDO
A u t o m o t i v e

5WY 8203-4-5



USA / Canada: (315 MHz)

SIEMENS VDO
A u t o m o t i v e

5WY 8201-2-3

FCC ID:KR55WY8201-2-3

CAN: 267 xxx xxxx

This device complies with part 15 of the FCC Rules. 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.