

Functional Description / User Manual

of the

SIEMENS VDO

Radio frequency remote control system

type

KMC GH F/L

Operation Guide

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 any interference received, including interference that may cause undesired operation.

Caution !

Any changes or modifications to the equipment not expressly approved by the party responsible for compliance could void user' s authority to operate the equipment.

FUNCTIONAL DESCRIPTION

1 System Components

The KMC GH F/L System is a vehicle remote keyless entry (RKE) system. This system consists of a Stand alone- type of receiver (SRx) with corresponding a RKE transmitter. SRx has implemented on board with RF generic receiver device

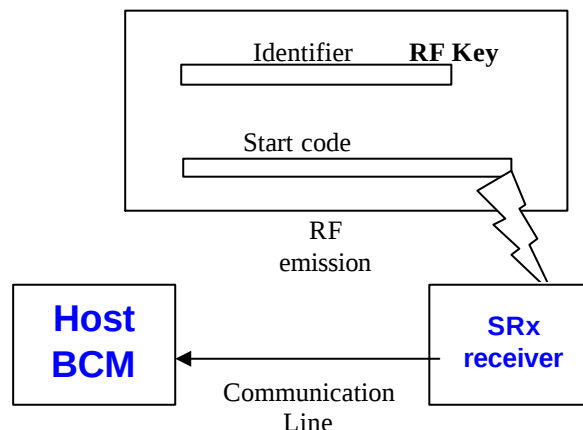
The described system is a radio-frequency remote control for central doors locking / unlocking, trunk release and Panic activity of an automotive vehicle. This system will be a part of the equipment of the KMC GH F/L vehicles.

The system is composed of the following ones:

- transmitter with 4 buttons (doors locking, door unlocking, panic, and trunk release)

System Operation:

To serve a remote keyless entry system for the KMC GH F/L RKE system. Remote keyless entry function is provided by the RF system of the SRx and the RKE transmitter. The operation of these functions are as follows:



Remote keyless Entry:

The RKE transmitter transmits at 315MHz for NA an FSK modulated data signal to the SRx. The RF system of SRx receives this encrypted RF signal. The SRx send the signal to corresponding the host Body Control Module through single wired K-line bus then the host module broadcasts the requested remote commands to the appropriate control modules in the vehicle through CAN –communication line . In general the following functions are provided:

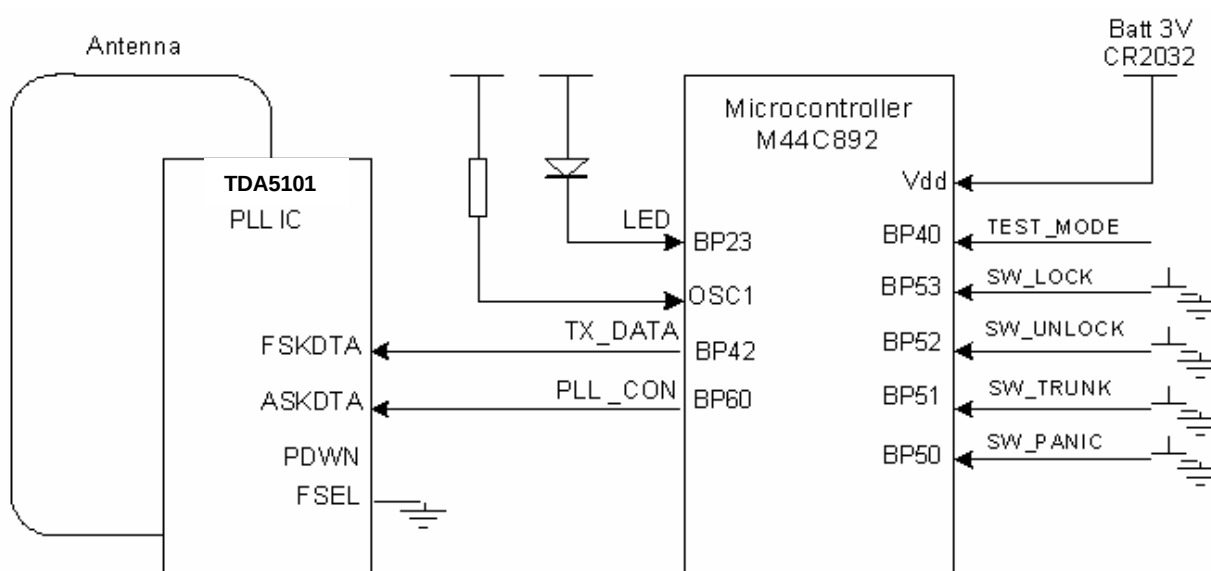
- Lock the car
- Unlock the car
- Unlock the trunk of the car
- Panic

2 Variants:

Product Name	Description
5WY8412	RKE transmitter 315MHz , 4 button

3 Block diagram

Block diagram for RKE transmitter(5WY8412):



4 Technical Data transmitter

Carrier frequency:	315.00MHz $\pm$ 50kHz
Output power :	< 75.6dBuV for NA
Modulation:	FSK
Frequency Generation:	PLL device
Number of channels:	1
Supply voltage:	3 V
Battery type:	lithium, CR 2032
Range:	< 6m

8. Typical usage pattern RKE transmitter

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

Transmitter ON 0.3375 seconds / hour

Transmitter OFF 3,599.6625 seconds / hour

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

9. Label Design transmitter

for NA

Siemens VDO
5WY8412

(Only product no.)