

# **Functional description / User manual**

**5WK48801**

Siemens AG  
Siemens VDO Automotive

SV IIC PE AS ID 1

**User Manual**

**Of the**

**Siemens VDO Transmitter**

**TYPE**

**5WK48801**

## 1. General Description of the RF Transmitter

The described system is a passive entry and passive start key (usually called PASE/PEPS system) with additional remote key less entry for central doors locking / unlocking and trunk. The system components constituting the Ford X -Carline application are:

- The RF key with 3 buttons (doors locking, unlocking and trunk).
- The  $\mu$ Controller and PLL for modulating the signal
- The PASE coils (three axis) for passive entry and passive start
- Additional Transponder in housing.

The transmitter is used to transmit information for locking or unlocking the vehicle by a unidirectional RF transmission line for normal remote operation by pressing a button. Also is implemented the function of PASE, the passive entry and passive start by push the start engine button inside the car. After push the car door handle the LF coils in the car sends a 125 kHz signal to key. The key wakes up and send a RF signal back to the KVM module (Receiver module). If the signal is valid the doors open. The system is also working on the same way, if you want to start the engine.

In general the following functions are provided:

- Lock the car
- Unlock the car
- Open the Trunk
- PASE (Access to car and start of engine by Start Engine Button inside the car)

## 2. Key Constitutive parts

The RF key is constituted with:

- Lower housing with space of the mechanical key blade
- Mechanical key blade
- Middle housing
- Upper housing
- Sealing and switch pad
- Button support
- PCB with minus pole SMD battery contact
- Plus pole battery contact
- 3V Lithium cell battery CR2032, 220mAh

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### 3. Power Supply

The transmitter is provided with 1 lithium battery (CR 2032) that gives a power supply of +3V. The key is protected against polarity reversal due to wrong battery insertion by mechanical means. The battery capacity covers the typical life time of two years.

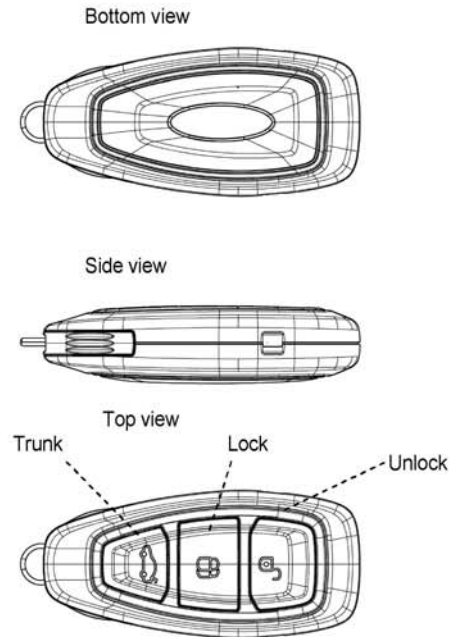
### 4. Button functions

User Action	Performed Function at Vehicle
short LOCK button press	central locking
LOCK button press for more than 500ms (about)	LOCK comfort function starts
short UNLOCK button press	central unlocking
UNLOCK button press for more than 500ms (about)	UNLOCK comfort function starts
TRUNK button press	unlock TRUNK

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## Mechanical Design



## Technical Data

Carrier frequency:	433,92MHz
Output power:	< 10mW
Type of modulation:	ASK / FSK
Method of frequency generation:	PLL
Number of channels:	3
Power supply:	battery (CR 2032)
Type of battery:	lithium

## Label Design

Siemens VDO  
5WK48801



Continental Automotive

FCC ID:KR55WK48801

IC:7812D-5WK48801

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## **LABEL DESIGN CANADA, USA**

Continental  
5WK48801

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IC:7812D-5WK48801

### **Owner Manual Canada:**

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.

### **Owner Manual USA:**

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.

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