

# **User Manual**

## **keyfob for**

## **SCW-433MHz**

# 1. TABEL OF CONTENTS

1.	TABEL OF CONTENTS .....	2
2.	HISTORY .....	3
3.	ABBREVIATION.....	4
4.	SCOPE AND CONTROL OF DOCUMENT .....	5
4.1	SCOPE OF DOCUMENT .....	5
4.2	AUTHORITY FOR THIS DOCUMENT.....	5
4.3	CHANGE CONTROL FOR THIS DOCUMENT .....	5
5.	PRODUCT SYSTEM OVERVIEW .....	6
5.1	SYSTEM ARCHITECTURE .....	错误！未定义书签。
5.2	SYSTEM SCHEMA .....	6
5.4	SYSTEM FUNCTIONAL DESCRIPTION.....	7
6.	GENERAL TECHNICAL REQUIREMENTS.....	8
6.1	KEY FOB .....	8
6.1.1	Mechanical dimension requirement .....	8
6.1.2	Electrical parameters.....	9

## 2. HISTORY

Version	Date	Author	Details
1.0	2024-08-30	Feng Xiao	

### 3. ABBREVIATION

<b>CAN</b>	Controller Area Network
<b>ECU</b>	Electronic control Unit
<b>RKE</b>	Remote Keyless Entry
<b>PEPS</b>	Passive entry passive start
<b>BCM</b>	Body Control Module
<b>EMS</b>	Engine Management System
<b>IPC</b>	Instrument Panel Cluster
<b>SSSW</b>	Start Stop Switch
<b>ESCL</b>	Electrical Steering Column Lock
<b>LF</b>	Low Radiated Frequency
<b>RF</b>	Radiated Frequency
<b>PDU</b>	Power distribution unit
<b>TBD</b>	To Be Defined

## 4. SCOPE AND CONTROL OF DOCUMENT

### 4.1 Scope of document

The intent of this document is to establish and define requirements for the PEPS system for Stellantis. This document establishes the functional, performance requirements for the SCW Vehicle Platform. The test and validation requirements are not included in this document.

### 4.2 Authority for this document

Stellantis System engineer and Kostal China System Engineer are the approval authorities of this document. Any changes on the requirements / specifications are to be reviewed and agreed with Stellantis and Kostal. Any new requirements or modified requirements shall have to be analyzed, reviewed and agreed by the corresponding of Stellantis engineering group and Kostal.

### 4.3 Change control for this document

After the initial release Kostal System Engineer shall be responsible to update and release new revisions as and when the need arises.

Changes to the format and content of this specification shall be made only after getting approval from Stellantis System Engineer and Kostal System Engineer.

## 5. PRODUCT SYSTEM OVERVIEW

### 5.1 Product Description

- 1、 Keyless entry;
- 2、 Key positioning in the vehicle or out the vehicle;
- 3、 RKE for locking and deblocking, car searching and other functions;
- 4、 Modulation type ASK/FSK;
- 5、 IMMO Backup start

### 5.2 System schema

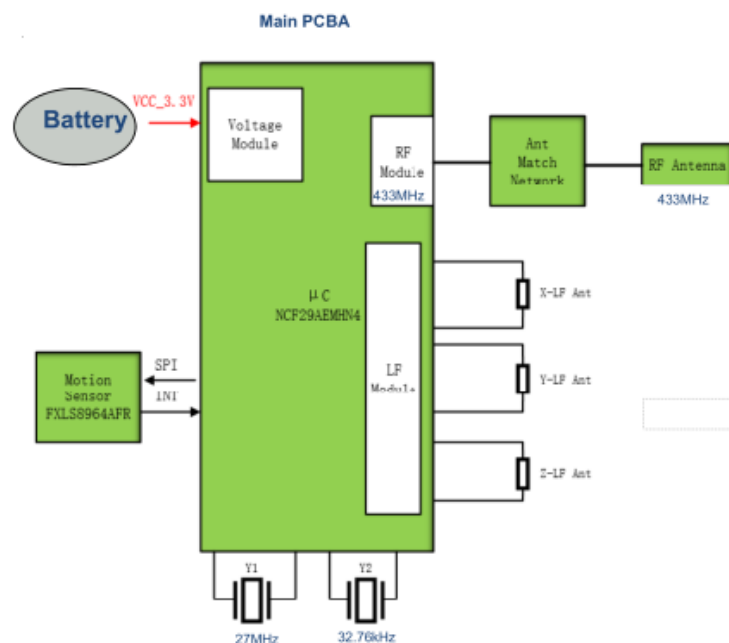


Fig 5.2.1 SCW-433MHz system schema

## 5.3 System functional description

The section describes the basic functions of Key

### ➤ RKE (for SCW)

There are 2 push buttons on the smart key with the functions of remote lock and unlock. When the unlock/lock-button is pressed longer than 2s, PEPS ECU sends the signal via CAN to inform BCM to control the windows.



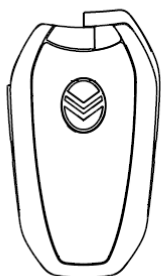
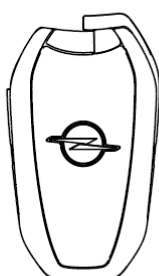
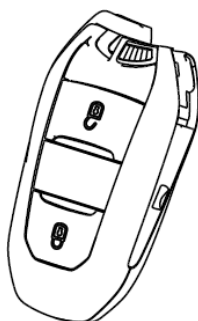
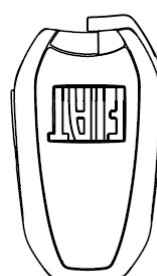
### ➤ Warning (for SCW)

Several warning functions are integrated in PEPS system, no valid key in the vehicle warning, key of low battery warning, key in the vehicle when exit warning etc.

## 6. GENERAL TECHNICAL REQUIREMENTS

### 6.1 Key fob

#### 6.1.1 Mechanical dimension requirement

*Citroen:**OV-OPEL:**OV-VAUXHALL:**FIAT:*



### 6.1.2 Electrical parameters

Parameters	Values	
	SCW-433MHz	SCW-315MHz
Working Voltage	DC 2V~3.6V	
Key fob quiescent current	10uA	
Working frequency	LF: 125KHz RF: 433MHz	LF: 125KHz RF: 315MHz
Transmit power	3 dBm (TBD)	
Working Temperature	-40° C~+85° C	
Reserving Temperature	-40° C~+95° C	
Duty Cycle	the device can be fired up to 1,000 times an hour.	

## 6.3 addition info of product

### Warning



#### EU Declaration of Conformity

Kostal (shanghai) Management Co.Ltd. hereby declares that this product is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. This product is allowed to be used in all EU member states. [www.kostal.com](http://www.kostal.com)



#### UK Declaration of Conformity

Hereby, [Kostal (shanghai) Management Co.Ltd] declares that the radio equipment type is in compliance with Directive 2017 (SI 2017 No. 1206, as amended by SI 2019 No. 696).The full text of the UK declaration of conformity is available at the following internet address: [www.kostal.com](http://www.kostal.com)

### Battery Instructional safeguard

Equipment containing one or more coin / button cell batteries shall have an instructional safeguard in accordance with Clause F.5.

The instructional safeguard is not required where these batteries are not intended to be replaced or are only accessible after damaging the equipment.

The elements of the instructional safeguard shall be as follows:

-element 1a: not available

- element 2: "Do not ingest battery, Chemical Burn Hazard" or equivalent wording

- element 3: the following or equivalent text

[The remote control supplied with] This product contains a coin / button cell battery. If the coin / button cell battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death.

- element 4: the following or equivalent text

Keep new and used batteries away from children.

If the battery compartment does not close securely, stop using the product and keep it away from children.

If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.

#### FCC Statement

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.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  - Consult the dealer or an experienced radio/TV technician for help important announcement

#### Important Note:

#### FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

#### 低功率射頻器材技術規範

取得審驗證明之低功率射頻器材,非經核准,公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。低功率射頻器材之使用不得影響飛航安全及干擾合法通信;經發現有干擾現象時,應立即停用,並改善至無干擾時方得繼續使用。前述合法通信,指依電信管理法規定作業之無線電通信。低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。