

PCK43302, PCK43304

433MHz Penta series Keyring Remotes with Frequency Hopping

FEATURES

- Small Size keyring remote with 2 or 4 buttons
- Dual Coding System, dip switch and encrypted code
- Transmission on 5 different frequencies
- Uses frequency hopping spread spectrum (FHSS)
- One of the most secure remote controls on the market
- AS/NZS 4268, CE and FCC certified



APPLICATIONS

- Keyless access control for automatic gates and doors
- Home automation i.e. garden lights, swimming pool control etc.
- Wireless security, lighting and automotive controls
- and anywhere else you need a wireless signal to transmit a contact closure

DESCRIPTION

The PentaCODE® dual coding system gives the installer the option to use the classic 12-way dip switch coding or one of over 17 billion encrypted codes.

With the 12-way dip switch, just match the keyring remotes and the receiver's dip switch and it's coded.

With the encrypted code you switch all the 12- way dip switches OFF and the remote and receiver automatically goes into the encrypted coding. The Pentacode® remotes, when used in encrypted mode, can be programmed from another working remote.

OEM CONFIGURATION

Elsema can customise keypad text and back labels to suit customer needs. Provide us with your designs. Label dimension is on page 5.

TECHNICAL DATA

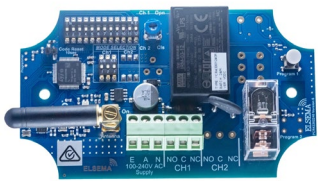
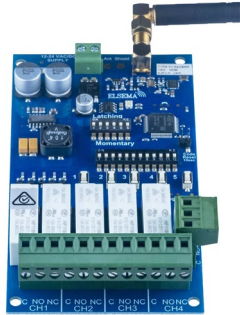
Operating Voltage	12 Volt Battery
Standby Current	1.8uA
Current Consumption	18mA (typical) at 12 Volts DC supply during transmission
Battery life	1.5 years with average use
Frequency Band	433.100 to 434.700MHz
Operating range	up to 200 metres depending on building structure and receiver antenna
Operating Temperature Range	-5 to 50°C
Decoding System	Encrypted 17 billion codes combinations or On board 12-way code switch
Weight	30 grams

ORDERING INFORMATION

<i>Part Number</i>	<i>Description</i>
PCK43302	2-button, Keyring Transmitter
PCK43304	4-button, Keyring Transmitter

COMPATIBLE RECEIVERS

Below is a list of compatible receivers for the PentaCODE® keyring remotes.

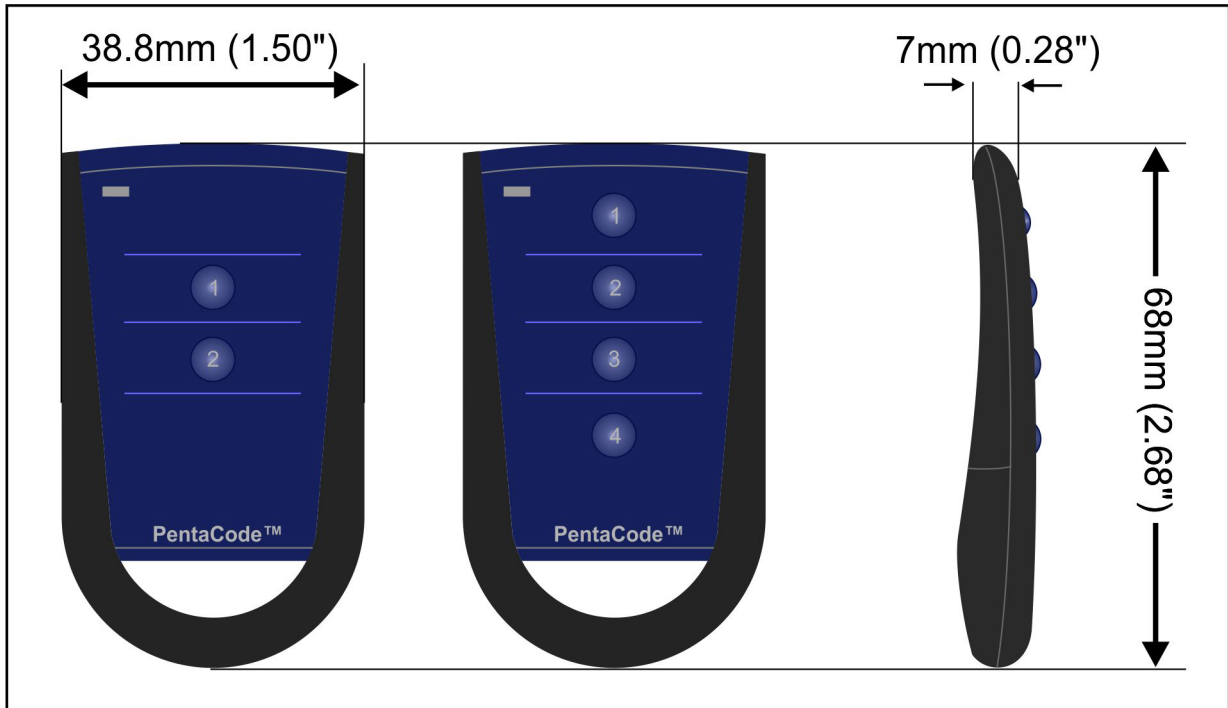
			
PCR43301RE 1-Channel Receiver with Relay Output. Enclosed in a case	PCR43302P 2-Channel Plug in type Receiver with Open Collector Output	PCR43302R 2-Channel Receiver with Relay Outputs	PCR43302RE 2-Channel Receiver with Relay Outputs. Enclosed in a case
			
PCR43301240R 1-Channel Receiver with 240VAC mains supply	PCR43301240RE 1-Channel Receiver enclosed in an IP66 case	PCR43302240R 2-Channel Receiver with 240VAC mains supply	PCR43302240RE 2-Channel Receiver enclosed in an IP66 case
			
PCR43304R 4-Channel Receiver with Relay Outputs	PCR43304RE 4-Channel Receiver enclosed in an IP66 case	PCR43305R 5-Channel Receiver with Relay Outputs	PCR43305RE 5-Channel Receiver enclosed in an IP66 case

ELSEMA'S INVENTION

Elsema has once again revolutionised the wireless, automatic gate and door industry. With our next generation of Penta series that use dual coding, frequency hopping and customizable features, these remotes and receivers are superior to normal garage door rolling code remotes.

Penta originated from the 5 sides of a Pentagon. The 5 sides representing each frequency the keyring remote control operates on. Most keyring remote controls operate on a single frequency, we wanted to be the first in the world to operate a keyring remote control on 5 different frequencies giving it a high level of security and immunity to interference.

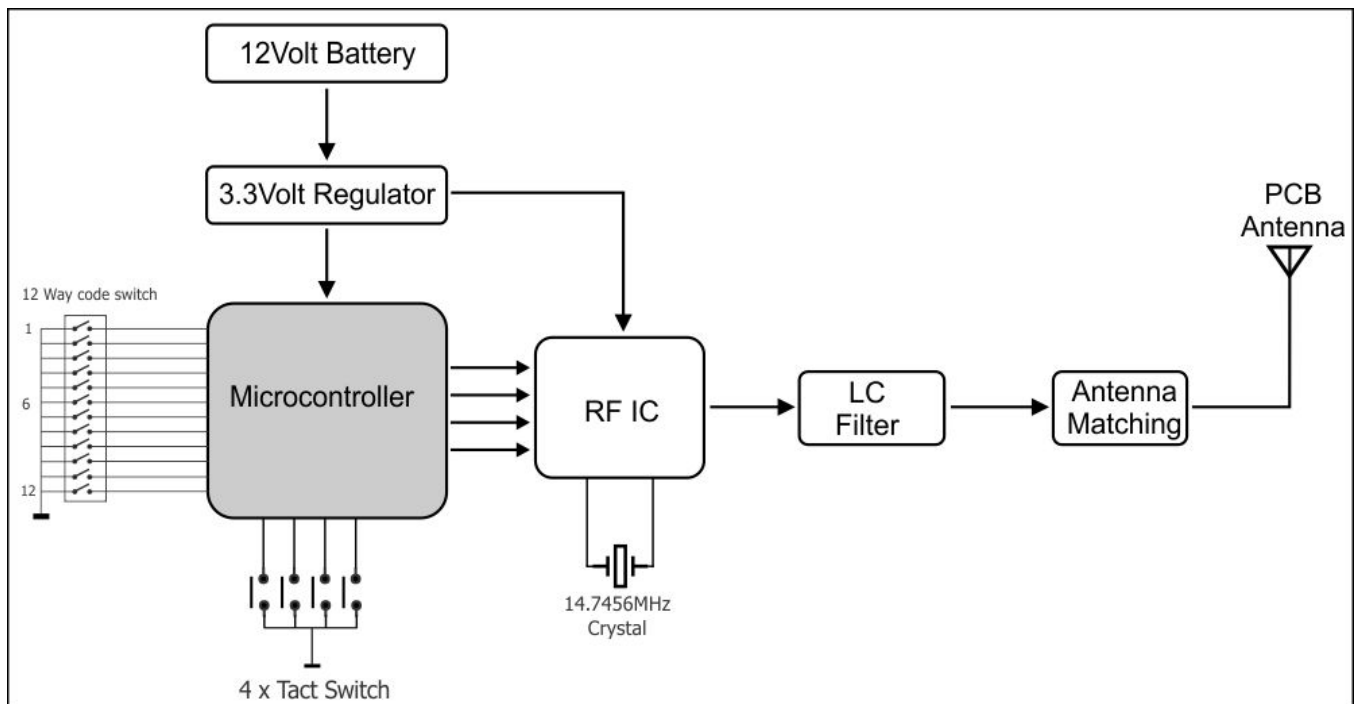
KEYRING DIMENSIONS



THEORY OF OPERATION

The microcontroller, upon detecting an active tact switch input, reads the setting of the 12-way dipswitch. The active input and the dipswitch data is then sent to the RF IC. The RF IC sends the frequency modulated (FM) carrier to the PCB antenna via the LC filter and antenna matching.

BLOCK DIAGRAM



FREQUENCY HOPPING

The PCK series keyring remotes use frequency hopping spread spectrum (FHSS). When a button is pressed, Dual Coding System simultaneously transmits the code on 5 different frequencies, making it impossible for the remote to be interfered with or jammed. This allows multiple transmitters to be used in close proximity with no interference or jamming.

This technology is usually used in very expensive equipment and military applications

BATTERY REPLACEMENT

The PCK series remotes use a 12 Volts DC battery (A23). The battery life is expected to be 1.5 years with average use. To replace the battery, press and slide the battery cover located at the back of the remote. This exposes the battery. Replace it with the same type of battery while observing the polarity. There may be a risk of explosion if wrong battery type is used.



Labeling/ Instruction Requirement

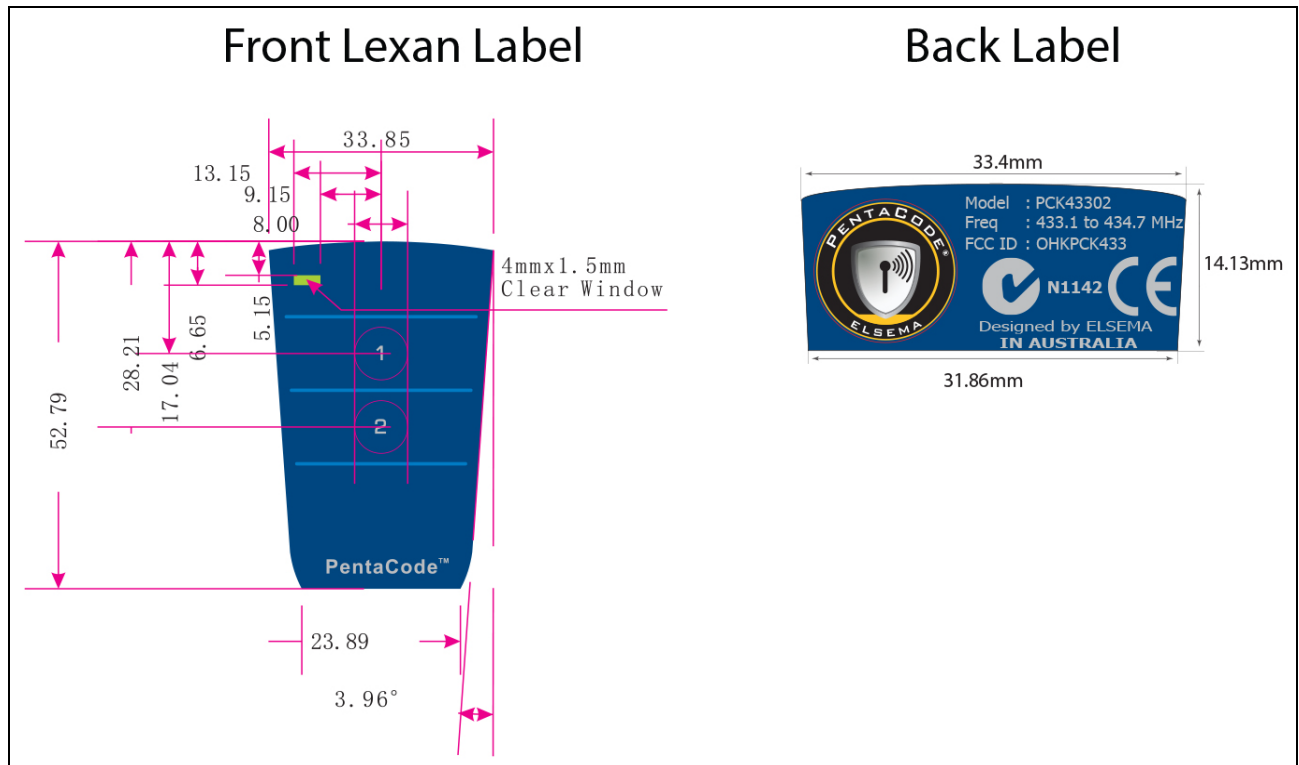
The PCK43302 and the PCK43304 keyring transmitters have been labeled in accordance with FCC and Australian regulations in effective to the day of this document. No further labeling is required, but it is necessary to include the FCC compliance statement and Declaration of Conformity in the end user's product statement.

Label Dimensions

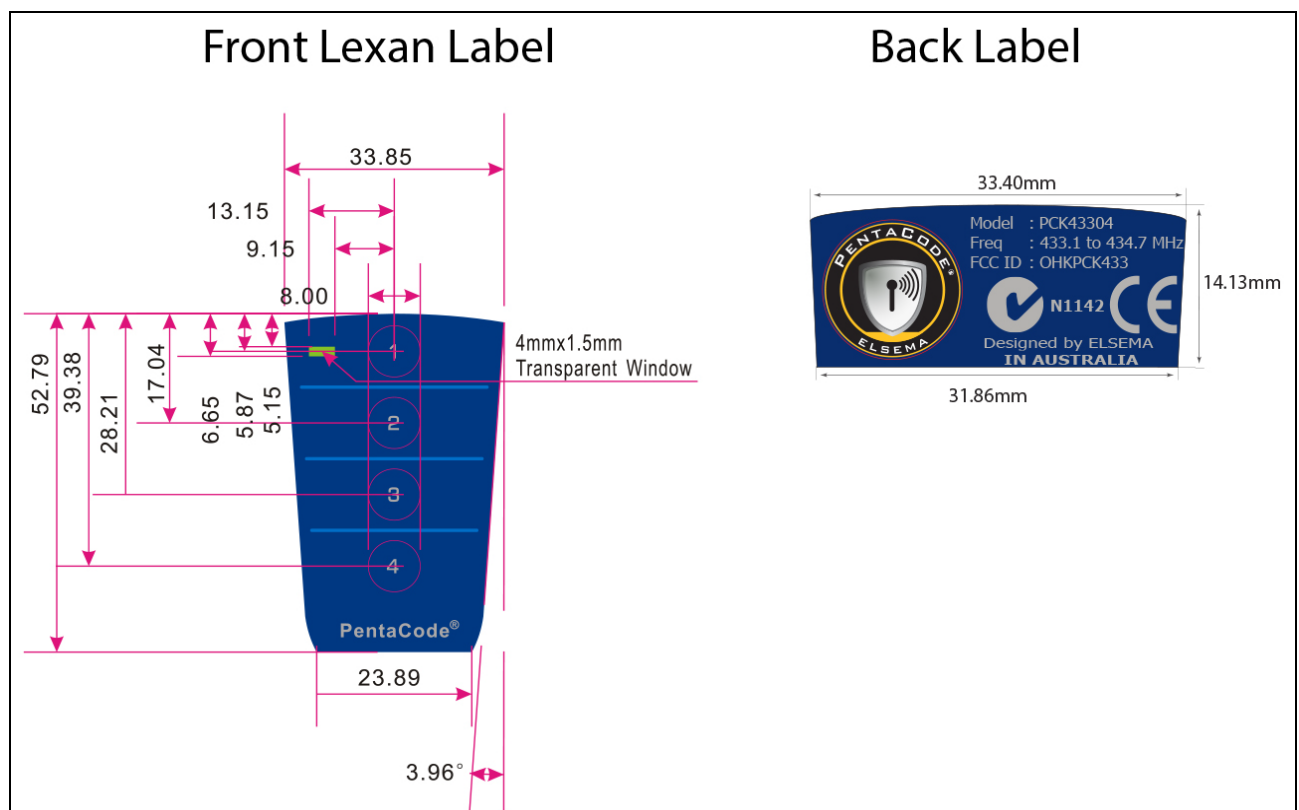
Custom Design PentaCODE® FOB remotes with your company logo and colours. Use the below templates and send us your designs.

MOQ: 100 pcs per order

PCK43302



PCK43304



PentaCODE® Programming Instructions

12- Way Dip Switch Coding

1. Set a random code on the receiver dip switch by flicking the dip switches "On" or "Off".
(DO NOT USE THE DEFAULT FACTORY SETTING FOR THE 12-WAY DIP SWITCH AS THIS IS A COMMON CODE)
2. Open the battery cover of the PentaCODE® remote.
3. Match the 12-way dip switch to the receivers 12-way dip switch.
4. Press button 1 on the remote and the receiver output should activate. This is indicated by the receiver LED.

To program the same PentaCODE® remote buttons 2, 3 or 4 to another receiver change dip switch 11 and 12 in the 2nd, 3rd and 4th receivers. For example:

	Receivers Dip Switch 11	Receiver Dip Switch 12
Receiver 1	Off	Off
Receiver 2	On	Off
Receiver 3	Off	On
Receiver 4	On	On

Dip switches 1 to 10 should all be the same in the remotes and the receivers.

Encrypted Coding - (All 12-Way Dip Switches must be "Off")

Coding the PentaCODE® remotes and receivers can be done in 3 different ways.

1. Receiver to a Remote
2. Remote to a Receiver
3. Remote to a Remote

➤ Receiver to a Remote

1. Press and hold the program button 1 on the receiver.
2. Press the remote button you want to program for 2 seconds, receiver LED will flash Green
3. Release the button on the receiver and the remote.
4. The LED on the PentaCODE® remote will flash to confirm the coding has been successful.

➤ Remote to a Receiver / Remote to a Remote

Set one of the remotes or receivers to broadcast its code. The broadcaster's code will be programmed to the other units.

- To broadcast the remotes code make sure all 12 dip switches are "off". Then press and hold button 1 and flick dip switch 12 "on" and then "off". This is confirmed by the LED's being on for 10 seconds. You can release the remotes button 1.

- To broadcast the receivers code, make sure all 12 dip switches are "off" and then flick dip switch 12 "on" and then "off". This is confirmed by the green LED being on for 10 seconds.

While broadcasting the code press button 1 on a different remote or receiver for 1 second and then release the button. The LED will flash twice to confirm successful programming.

Broadcasting will be latched on for 10 seconds or stop if any dipswitch is turned on.

Deleting Receivers Memory

Short the CC pin on the receiver for 10 seconds. **This will delete all the remotes from the receiver's memory.**

REGULATORY COMPLIANCE STATEMENTS**American Users**

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.

FCC Notice

This device 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 device generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, 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.

Caution: Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

Australian and New Zealand Users

This device has been tested and found to comply with the limits for a Class [B] digital device, pursuant to the Australian/New Zealand standard AS/NZS 4268 set out by the Spectrum Management Agency.



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ATTESTATION OF CONFORMITY

Date of Issue: 2013-04-05

Attestation Number: R1303066-AoC

Bay Area Compliance Laboratories Corp. (BACL) hereby declares that testing has been completed and reports have been generated for;

Product: Keyring Transmitter

Model: PCK43304

Applicant: South Pacific Electronics Ltd.
Haji Street, Martintar, Nadi, Fiji Islands

That this product has been assessed and found to comply against the following Standards;

EN 300 220-2 V2.4.1(2012-05), EN 301 489-3 V1.4.1(2002-08)
& EN 60950-2:2006 + A12:2011

Application of the CE Mark is permitted only after all applicable requirements are met in accordance with the European Union Rules, including the manufacturer's issuance of a "Declaration of Conformity."

This attestation is specific to the standard(s) stated above and compliance with additional standards and/or directives may be required.

Attestation by: John Chan

Certification Manager

Signature

2013-04-05

Date

This document issued by Bay Area Compliance Laboratories Corp., ("BACL" or "Company"), is subject to its general conditions of service printed on the quotation, purchase order acknowledgement, or on the Product Certification Agreement and is available on request. We hereby notify you that those aforementioned documents contain details on the limitations of the liability, indemnification and jurisdiction issues defined therein. Anyone possessing this document is advised that information contained herein reflects the Company's results or findings at the conclusion of testing or services rendered only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of a duly authorized representative of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. The results, opinions or attestations shown in this document refer only to the sample(s) test and such sample(s).

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