

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
- FCC and AS/NZS 4268 pre-certified



APPLICATIONS

- Keyless access control for automatic gates and doors
- Home automation i.e. garden lights, swimming pool control etc.
- Wire 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. No need for programmers, memory chips or computer databases to store the code.

With the encrypted code you switch all the 12- way dip switches OFF and the remote and receiver automatically goes into the encrypted coding.

OEM CONFIGURATION

Elsema can customise keypad text and back labels to suit customer needs. Contact Elsema for more details.

TECHNICAL DATA


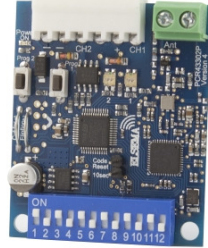
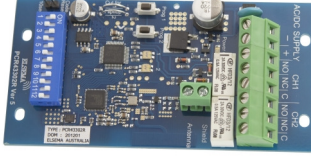
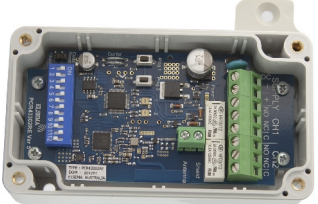



Operating Voltage	12 Volt Battery
Standby Current	1.8uA
Current Consumption	18mA (typical) at 12 Volts DC supply during transmission
Battery life	1.5 years with average use
Frequencies	433.100 to 434.700MHz
Operating range	up to 80 metres depending on building structure and receiver antenna
Operating 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.

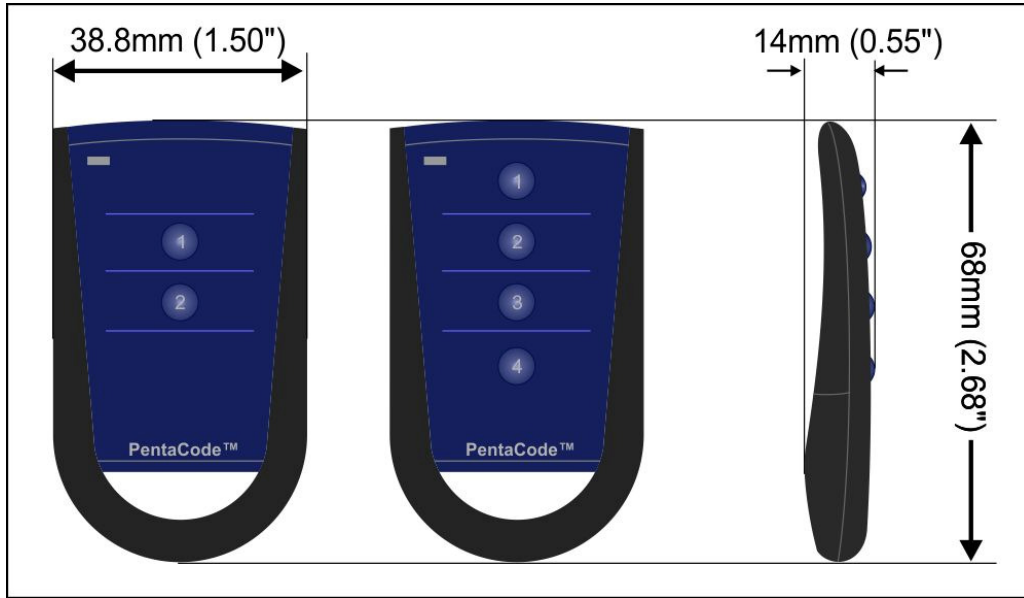
			
<p>PCR43301RE 1-Channel Receiver with Relay Output. Enclosed in a case</p>	<p>PCR43302P 2-Channel Plug in type Receiver with Open Collector Output</p>	<p>PCR43302R 2-Channel Receiver with Relay Outputs</p>	<p>PCR43302RE 2-Channel Receiver with Relay Outputs. Enclosed in a case</p>
			
<p>PCR43304RE 4-Channel Receiver enclosed in an IP66 case</p>	<p>PCR43304R 5-Channel Receiver with Relay Outputs</p>	<p>PCR43305RE 5-Channel Receiver enclosed in an IP66 case</p>	

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 customisable 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.

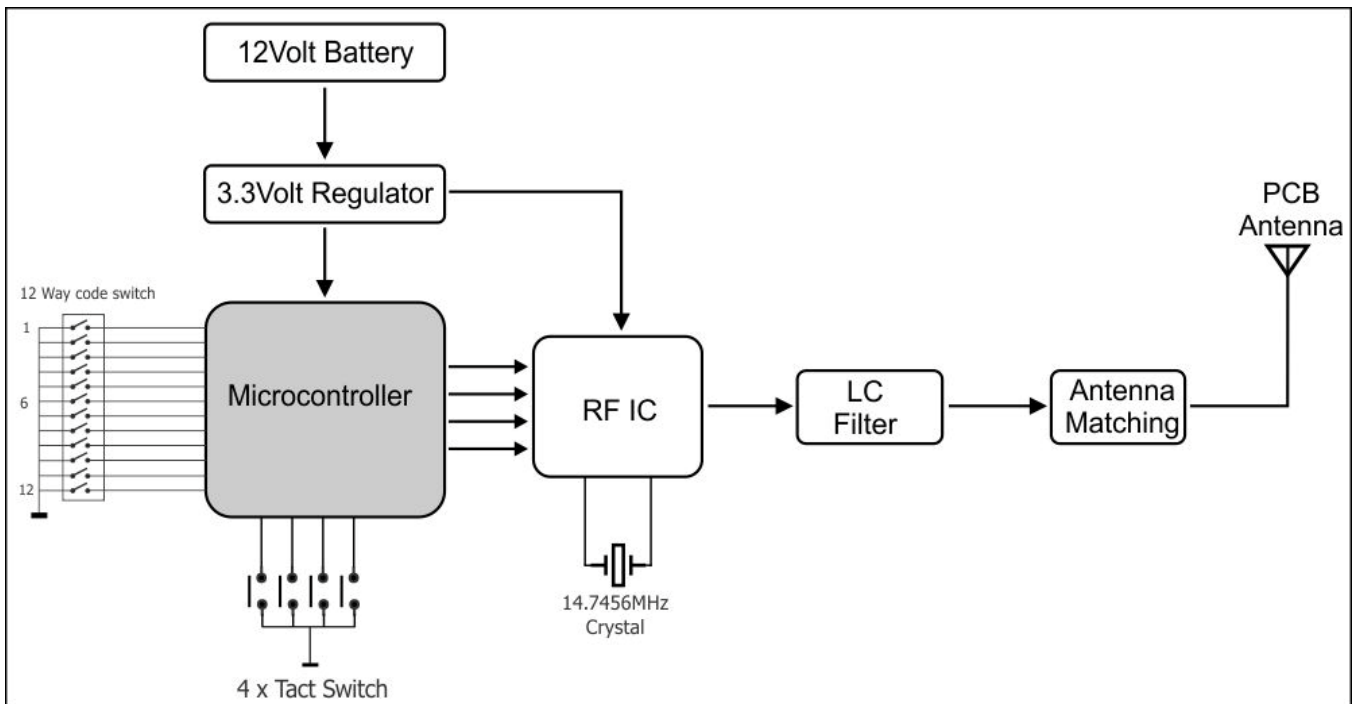
KEYRING DIMENSIONS



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. In order to replace the battery, press and slide the battery cover located at the back on 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 type of battery 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 in the end users product statement.

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 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 4268.2 (2008) set out by the Spectrum Management Agency.