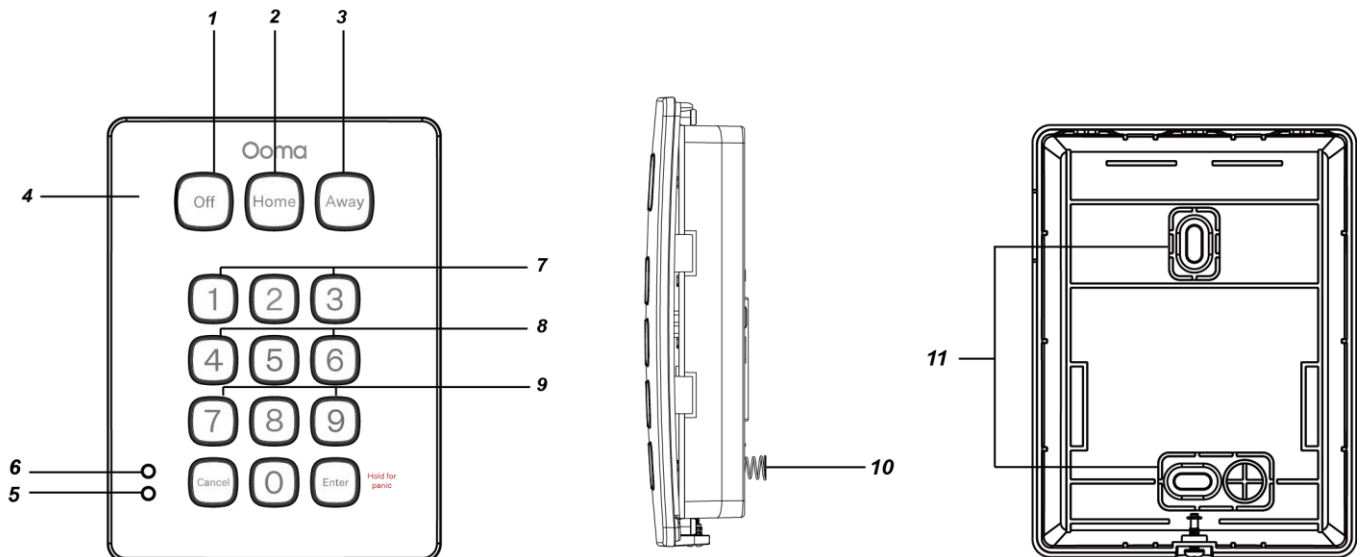


REMOTE KEYPAD (SENSEKP001)

SENSEKP001 is a smart wireless remote keypad that includes a DECT ULE transceiver for reliable system operation. It uses smart message control, which verifies that all messages are successfully transmitted. The keypad also features a power conservation function that consumes power only when in operation.

● **Parts Identification**



- | | |
|---------------------------|---|
| 1. Off Key/LED | 7. Panic Alarm |
| 2. Home Key/LED | - press both 1 and 3 to trigger Panic Alarm |
| 3. Away Key/LED | 8. Fire Alarm |
| 4. Buzzer | - press both 4 and 6 to trigger Fire Alarm |
| 5. Fault LED (Orange LED) | 9. Medical Alarm |
| 6. Power LED (Green LED) | - press both 7 and 9 to trigger Medical alarm |
| | 10. Tamper Switch |
| | 11. Mounting Holes |

● **General Operation**

- Press any key for one second to send a short key value.
- Press any key for more than 3 seconds to send a long key value.
- Panic Alarm — Press **1** key + **3** key at the same time.
- Fire Alarm — Press **4** key + **6** key at the same time.
- Medical Alarm — Press **7** key + **9** key at the same time.

<NOTE>

- ☞ A short beep will sound when a key is pressed. A long beep will sound when a key is pressed and held for more than 3 seconds.
- ☞ Each valid key press will be transmitted to the Control Panel as an event. The Keypad will wait for 30 seconds to receive response from the Control Panel.

● **Backlight Indication**

- After battery is inserted, the backlight will flash once to indicate that Keypad is ready for operation.

- The backlight will turn on for 10 sec when any key (except Off/Home/Away key) is pressed. When the Off/Home/Away key is pressed, the backlight remains off.

● **Power**

- Remote keypad uses one CR123 3V Lithium battery as its power source.
- Remote keypad can also detect the battery status. If the battery voltage is low, the Low battery signal will be sent to the Control Panel for displaying the status accordingly.
- Before shipment, the battery is pre-installed by the factory.
- When changing battery, press any key a couple times to discharge before inserting new battery.

<WARNING>

- ☞ The polarity of the battery must be observed.
- ☞ Only use specified battery with the keypad. Improper use or handling of lithium battery may result in heat generation, fire or explosion, which may lead to personal injuries.
- ☞ Dispose of used battery according to the instructions.

● **Operating Temperature & Humidity**

- Operating Temperature: -10°C ~ 50°C
- Humidity: Up to 85% relative humidity @23°C

● **Tamper Protection**

- The keypad is protected against any attempt to open the lid or to detach keypad from its mounting surface.
- Tamper protection is disabled when the keypad is in Test Mode.

● **Getting Started**

A. The Keypad has never been learned into a Control Panel (First Time Learning)

- Step 1. Put the Control panel into learning mode.
- Step 2. Power on the keypad by removing the battery insulator, the Remote keypad will automatically send a learn code to the Control Panel.
- Step 3. During learning process, the power LED will flash for 10 times.
- Step 4. If the Control Panel receives the learning code, it will display the info accordingly. Refer to the operation manual of your Control Panel to complete the learn-in process.
- Step 5. The Keypad will emit 3 beeps when learning is successful.

B. The Keypad has been previously learned into a Control Panel (Re-learn into a new Control Panel)

- Step 1. Put the Control panel into learning mode.
- Step 2. Put the Keypad into test mode. (Refer to **Test Mode** section.)
Press "Cancel" key and 7 to send a learning code to the Control Panel. Remote keypad will sound a long beep.
- Step 3. During learning process, the power LED will flash for 10 times.
- Step 4. If the Control Panel receives the learning code, it will display the info accordingly. Refer to the operation manual of your Control Panel to complete the learn-in process.
- Step 5. The Keypad will emit 3 beeps when learning is successful.

- After the Remote keypad is learnt-in, press any key under normal operation mode to send a key value to the Control Panel to confirm this location is within the signal range of the Control Panel. (If the keypad is still in test mode, please leave test mode by pressing the Away key twice.)
- When you are satisfied that the Remote keypad works in the chosen location, you can proceed with mounting the Remote keypad following the steps described below (please refer to "**Mounting Remote keypad**" for details).

● **Test Mode**

● **To enter test mode:**

- 1) Press and hold the "Enter" key while powering on the remote keypad by inserting the CR123 3V Lithium battery. Keep holding the "Enter" key and don't release it until the backlight turns on with two beeps.
- 2) Within 30 seconds put remote keypad in Test mode by entering keypad PIN code (default: **0000**), then press the "Cancel" key.
- 3) The three Off/Home/Away LEDs will turn on along with a long beep.

<NOTE>

- ☞ If keypad PIN code is entered incorrectly, Fault LED (Orange LED) will flash 4 times along with 4 beeps.

- **Test Mode Function:**

- 1) Press the "Cancel" key and then 6 key to Edit Keypad Pin Code.
Enter **Old** Keypad Pin Code and then press the "Cancel" key. A long beep will sound.
Enter **New** a new 4-digit Keypad Pin Code and then press the "Enter" key. A long beep will sound.

<NOTE>

- ☞ If the **Old** Keypad Pin Code is entered incorrectly, the keypad will emit 4 beeps to indicate error.
- ☞ If more or less than 4 digits are entered for the **New** Keypad Pin Code, the keypad will also emit 4 beeps to indicate error.

- 2) Press the "Cancel" key then 7 key to send the learning code.
- 3) Press the "Away" key **twice** to leave Test mode.

<NOTE>

- ☞ The Remote keypad will automatically exit Test mode after 5 minutes of inactivity and return to Stand-by mode. All the LEDs will turn off and the Keypad will emit one long beep.

- **Keep Alive**

- The Keypad transmits keep Alive signal regularly every 120 minutes.

- **Reset PIN Code to Default**

- Step 1 Remove the batteries and release the tamper.
Step 2 Press & hold **3** key while inserting the battery back.
Step 3 Continue pressing **3** key until keypad emit 3 beeps to indicate successful reset.
Step 4 Release **3** key, the reset process is complete.
After reset, PIN code reverts to factory default values, **0000**.

- **Mounting Remote Keypad**

To mount the remote keypad:

- I. Remove the front cover.
- II. Using the 2 mounting holes of the back cover as a template, mark off the positions in the most appropriate place.
- III. Insert the wall plugs if fixing into plaster or brick surface.
- IV. Screw the Remote keypad onto the wall plugs.
- V. Replace the front cover.

- **Unit Definition**

Table1- Unit definition

Unit	Definition	Reference
Unit 0	Device Management Service	Table 2
Unit 1	Key (Each Key is defined for Short Key Value, Long Key Value, and Dual Key Value.)	Table 3,4,5,6
Unit 2	Power LED (Green)	Table 7
Unit 3	Fault LED (Orange)	Table 8
Unit 4	Buzzler	Table 9
Unit 5	Off LED	Table 10
Unit 6	Home LED	Table 11
Unit 7	Away LED	Table 12

- **ULE Information**

Home Control Profile: Simple Keypad

Unit ID: 0

Unit Type: Device Management (0x0001)

Table 2

Interface	UID	M/O	Base	Keypad
Device Management Service	0x0001	M	Client Side	Server Side
Device Information Service (Annex A)	0x0005	M	Client Side	Server Side
Attribute Reporting Service	0x0006	M	Client Side	Server Side

Power Service	0x0110	O	Client Side	Server Side
Keep Alive Service	0x0115	O	Client Side	Server Side
Tamper	0x0101	O	Client Side	Server Side
SUOTA Service	0x0400	O	Server Side	Client Side

Unit ID: 1

Unit Type: Simple Keypad (0x0118)

Table 3

Interface	UID	M/O	Base	Keypad
Simple Keypad Interface (Annex B)	0x0203	M	Client Side	Server Side
Alert Interface (Annex C)	0x0100	O	Client Side	Server Side

a. Key Value (Short Key) [Simple Keypad Interface]

Table 4 - Short Key

Key	Short Key Value
0	0x00000030 (U32)
1	0x00000031 (U32)
2	0x00000032 (U32)
3	0x00000033 (U32)
4	0x00000034 (U32)
5	0x00000035 (U32)
6	0x00000036 (U32)
7	0x00000037 (U32)
8	0x00000038 (U32)
9	0x00000039 (U32)
Cancel	0x0000002A (U32)
Enter	0x00000023 (U32)
Off	0x0001F512 (U32)
Home	0x00002302 (U32)
Away	0x0001F513 (U32)

b. Key Value (Long Key) (The key has been pressed more than 3 sec.) [Simple Keypad Interface]

Table 5 - Long Key

Key	Long Key Value
0	0x80000030 (U32)
1	0x80000031 (U32)
2	0x80000032 (U32)
3	0x80000033 (U32)
4	0x80000034 (U32)
5	0x80000035 (U32)
6	0x80000036 (U32)
7	0x80000037 (U32)
8	0x80000038 (U32)
9	0x80000039 (U32)
Cancel	0x8000002A (U32)
Enter	0x80000023 (U32)
Off	0x8001F512 (U32)
Home	0x80002302 (U32)
Away	0x8001F513 (U32)

c. Key Value (Dual Key)[Alert Interface]

Table 6 - Dual Key

Key	Dual Key Value
1 + 3 (Panic Alarm)	0x00000001 (U32) (Active) 0x00000000 (U32) (Restore)
4 + 6 (Fire Alarm)	0x00000002 (U32) (Active) 0x00000000 (U32) (Restore)
7 + 9 (Medical Alarm)	0x00000004 (U32) (Active) 0x00000000 (U32) (Restore)

Unit ID: 2

Unit Type: Simple Led (0x0113), Power Led (Green)

Table 7 - Power Led

Interface	UID	M/O	Base	Keypad
Simple Visual Control Interface (Annex D)	0x0305	M	Client Side	Server Side

Unit ID: 3

Unit Type: Simple Led (0x0113), Fault Led (Orange)

Table 8 - Fault Led

Interface	UID	M/O	Base	Keypad
Simple Visual Control Interface (Annex D)	0x0305	M	Client Side	Server Side

Unit ID: 4

Unit Type: Simple Led (0x0113), Buzzle

Table 9 - Buzzle

Interface	UID	M/O	Base	Keypad
Simple Visual Control Interface (Annex D)	0x0305	M	Client Side	Server Side

Unit ID: 5

Unit Type: Simple Led (0x0113), OFF Led

Table 10 - OFF Led

Interface	UID	M/O	Base	Keypad
Simple Visual Control Interface (Annex D)	0x0305	M	Client Side	Server Side

Unit ID: 6

Unit Type: Simple Led (0x0113), Home Led

Table 11 - Home Led

Interface	UID	M/O	Base	Keypad
Simple Visual Control Interface (Annex D)	0x0305	M	Client Side	Server Side

Unit ID: 7

Unit Type: Simple Led (0x0113), Away Led

Table 12 - Away Led

Interface	UID	M/O	Base	Keypad
Simple Visual Control Interface (Annex D)	0x0305	M	Client Side	Server Side

● Annex A: Device Information Services

Table 13 - Device Information Interface: Attributes

Identifier	Name	Content	Access
0x01	HF core Release	02	Read
0x02	Profile Release	01	Read
0x03	Interface Release	01	Read
0x04	Paging Caps	00	Read
0x05	Min Sleep Time	00000000	Read
0x06	Actual Response Time	00000000	Read
0x07	Application Version	3	Read
0x08	Hardware Version	-	Read
0x09	EMC	0FEB	Read
0x0A	IPUI	0298B000F6	Read
0x0B	Manufacture	-	Read
0x0C	Location	Living Room	Read/Write
0x0D	Device Enable	01	Read/Write
0x0E	Friendly Name	-	Read/Write
0x0F	Device UID	(None)	Read
0x10	Serial	abcd	Read

● Annex B: Simple Keypad Interface

1. Server Attributes: None
2. Client Attributes: None
3. Server to Client Commands:

Table 14 - Simple Keypad commands

Command ID	Command Name	Client Role	Server Role	Response
0x01	KeyPressed	M	M	O

4. Client to Server Commands: None

● Annex C: Alert Interface

1. Server Attributes

Table 15 - Alert Interface Server, Attributes

Attribute ID	Attribute Name	Attribute Type	Attribute Values	Attribute Access	M/O
0x01	State	U32 (bitmask)	0x00000000 - 0xFFFFFFFF	Read Only	M
0x02	Enable	U32 (bitmask)	0x00000000 - 0xFFFFFFFF	Read / Write	M

2. Client Attributes: None

3. Server to Client Commands

Table 16 - Implementation status of Alert Interface Server commands.

Command	Client Role	Server Role	Response
Status	M	M	N/A

4. Client to Server Commands: None

● Annex D: Simple Visual Control Interface

1. Server Attributes: None

2. Client Attributes: None

3. Server to Client Commands: None

4. Client to Server Commands

Table 17 - Implementation status of Simple Visual Control Client commands

Command ID	Command	Client Role	Server Role	Response
0x01	ON	O	M	O
0x02	OFF	O	M	O
0x03	Blink	O	O	O

● Reference:

[1] HF-Profile-Version_1.4.0.pdf

[2] HF-Service-Version_2.0.0.pdf

[3] HF-Interface-Version_1.4.0.pdf

Federal Communication Commission Interference Statement

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 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.

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

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 Exposure to Radio Frequency (RF) Signals

This equipment must be installed and operated in accordance with provide instructions and the antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons.

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

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.